

Port Master Plan Volume I: Draft Program Environmental Impact Report

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DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT

PORT MASTER PLAN UPDATE

VOLUME 1

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Acronyms and Abbreviations

μPa	microPascals
μg/cm ₃	micrograms of lead per cubic meter
2016 SIP	2016 Plan for Attaining the National Ozone Standards
2020 SIP	2020 Plan for Attaining the National Ozone Standards
AB	Assembly Bill
AB 2588	Air Toxics Hot Spots Information and Assessment Act of 1987
AB 691 Report	Sea Level Rise Vulnerability Assessment and Coastal Resiliency Report
ABM	Activity Based Model
ACC	Advanced Clean Cars
ACM	asbestos-containing material
ADA	Americans with Disabilities Act
ADP	Airport Development Plan
ADT	average daily traffic
AFY	acre-feet per year
AGR	agricultural supply
AIA	Airport Influence Area
AICUZ	Air Installations Compatible Use Zones
Airport Authority	San Diego County Regional Airport Authority
Airport Committee	Airport Authority initiated the Harbor Drive Mobility Committee
Alquist-Priolo	Alquist-Priolo Earthquake Fault Zoning Act
ALUC	Airport Land-Use Commission
ALUCP	Airport Land Use Compatibility Plan
AQIA	Air Quality Impact Analysis
AR4	IPCC Fourth Assessment Report
ARA	Archaeological Resources Assessment
ARB	California Air Resources Board
ASCE	American Society of Civil Engineers
AST	aboveground storage tank
ATCM	airborne toxic control measure
ATP	Active Transportation Plan
BACT	best available control technology
BAE Systems	BAE Systems San Diego Ship Repair Facility
Basin 9-033	Coastal Plain of San Diego Basin
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAU	business-as-usual
Bay	San Diego Bay
BMP	best management practice
Board	District Board of Port Commissioners
bp	before present
BPC	Board of Port Commissioners

BTU	British thermal units
C&D	Construction and Demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAC	County Administration Center
CAC	County Administration Center
CAFÉ	Corporate Average Fuel Economy Standards
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Division of Occupational Safety and Health
Cal-Am	California American Water Company
CalEEMod	California Emissions Estimator Model
CalEnviroScreen	California Communities Environmental Health Screening Tool
CalEPA	California Environmental Protection Agency
CalGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAO	Cleanup and Abatement Order
CAP	Climate Action Plan
CAPP	Community Air Protection Program
CARB	California Air Resources Board
CBC	California Building Code
CCA	California Coastal Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CDO	Cease and Desist Order
CDP	Coastal Development Permit
CEC	California Energy Commission
CEIDARS	California Emission Inventory Development and Reporting System
CEMP	California Eelgrass Mitigation Policy
CEPAM	California Emission Projection Analysis Model
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CERP	Community Emissions Reduction Program
CERP	Community Emissions Reduction Plan
CESA	California Endangered Species Act
CESPT	Comisión Estatal de Servicios Públicos de Tijuana
CFD	Coronado Fire Department and Lifeguard Services
CFL	compact fluorescent lamp
CFR	Code of Federal Regulations
CH ₄	methane
CHC	Commercial Harbor Craft

CHE	cargo handling equipment
CHP	California Highway Patrol
CHRIS	California Historical Resource Information System
City	City of San Diego
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
Coalition	San Diego Navy Broadway Complex Coalition
COCs	constituents of concern
COD	chemical oxygen demand
Continental Maritime Shipyard IO	Continental Maritime ship repair facility
CoSMoS	Coastal Storm Modeling System
CPD	City of Coronado Police Department
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSLC	California State Lands Commission
CST	Cruise Ship Terminal
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CVBMP	Chula Vista Bayfront Master Plan
CWA	Civil Works Administration
CWA	Clean Water Act
CWA	Civil Works Administration
CY	Calendar Year
dB	decibel
DDT	dichlorodiphenyltrichloroethane
DEH	Department of Environmental Health
Dewatering General Permit	General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters Within the San Diego Region
District	San Diego Unified Port District
District Tidelands	District lands, tidelands, and submerged lands
District's	San Diego Unified Port District's
DMP	Dredging Management Program
DMP	Dredging Management Plan
DOT	Department of Transportation
DPM	diesel particulate matter

DPR	Department of Parks and Recreation
DPS	distinct population segments
Draft Plan	Draft California 2030 Natural and Working Lands Climate Change Implementation Plan
DSVs	Deep Submergence Vehicles
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EAC	Environmental Advisory Committee
ECA	Emission Control Area
EDD	Employment Development Department
EDF	Environmental Defense Fund
EDR	Environmental Database Resource, Inc.
EFH	essential fish habitat
EIR	Environmental Impact Report
ELAP	Environmental Laboratory Accreditation Program
EMPN	Embarcadero Marina Park North
EMPS	Embarcadero Marina Park South
EMS	Emergency Medical Services
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Environmental Site Assessment
ESA	Endangered Species Act
EV	electric vehicle
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRMS	Flood Insurance Rate Maps
FR	Federal Register
FRS	fast response squad
FTA	Federal Transit Administration
FUDS	Formerly Used Defense Sites
g/L	75 grams per liter
GDLFP	General Dynamics Lindberg Field Plant
GHG	greenhouse gas
GIS	geographic information system
gpd	gallons per day
gpm	gallons per minute
GVWR	Gross Vehicle Weight Rating
HABS	Historic American Buildings Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscapes Survey

HAPC	Habitat Area of Particular Concern
HAPs	hazardous air pollutants
HC	hydrocarbons
HDTF	Harbor Drive Test Facility
Health and Safety Plan	Health and Safety Plan for Dredging Activities
HFCs	hydrofluorocarbons
HMD	Hazardous Materials Division
HMTS	hazardous materials technical study
HOV	High-Occupancy Vehicle
hp	horsepower
HPAHs	high-molecular-weight PAHs
HPD	Harbor Police Department
HPD	heavily on District
HUs	hydrologic units
Hz	Hertz
I	Interstate
IAS	Institute of Aeronautical Sciences
IBFD	Imperial Beach Fire Department
IBWC	International Boundary and Water Commission
IES/IDA	Illuminating Engineering Society and International Dark Sky Association
IIPP	Injury Illness Prevention Program
IMO	International Maritime Organization
in/s	inches per second
in/s ²	inches per second squared
IND	industrial service supply
Industrial General Permit	General Permit for Stormwater Discharges Associated with Industrial Activities
INRMP	Integrated Natural Resources Management Plan
IOs	Investigative Orders
IPAC	Information, Planning, and Consultation System
IPCC	Intergovernmental Panel on Climate Change
IS&E Order	Imminent or Substantial Endangerment Determination and Remedial Action Order
ITC	Intermodal Transit Center
JHOC	Joint Harbor Operations Center
JPA	Joint Powers Authority
JRMP	Jurisdictional Runoff Management Plan
kg/yr	kilograms per year
kHz	kilohertz
kW	kilowatts
kWh	kilowatt hour
LBP	lead-based paint
LCFS	Low Carbon Fuel Standard

LCPs	Local Coastal Plans
LDS	Land Disposal Sites
LEA	Local Enforcement Agency
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
L_{eq}	equivalent sound level
LHCE	Laurel Hawthorn Central Embayment
LHE	Laurel Hawthorn Embayment
LID	low-impact development
L_{max}	Maximum Sound Level
L_{min}	Minimum Sound Level
LOS	level of service
LPAHs	low-molecular-weight PAHs
LRMOSP	Long-Term Resource Management Options Strategic Plan
LT	long-term
LUST	leaking underground storage tank
LV	Vibration Velocity Level
L_{xx}	Percentile-Exceeded Sound Level
M&I	Municipal and Industrial
m_2	square meter
MARPOL	International Convention for the Prevention of Pollution from Ships
MBTA	Migratory Bird Treaty Act
MCAS	Maritime Clean Air Strategy
mg/L	milligrams per liter
mgd	million gallons per day
MICR	maximum incremental cancer risk
MLLW	mean lower-low water
MLO	Model Lighting Ordinance
mm	millimeters
MMPA	Marine Mammal Protection Act
MMRP	Mitigation Monitoring and Reporting Program
MMs	mitigation measures
MMT	million metric tons
MOU	Memorandum of Understanding
MPC	maximum practical capacity
mpg	miles per gallon
mph	miles per hour
MSL	mean sea level
MT	metric tons
MTS	Metropolitan Transit System
MUN	municipal and domestic supply
MUTCD	Manual on Uniform Traffic Control Devices
MWD	Metropolitan Water District

MWh	megawatt-hour
N ₂ O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NAS	Naval Air Station
NASSCO	National Steel & Shipbuilding Company
NAVAIDS	navigational aids
NCCP	Natural Communities Conservation Plan
NCMT	National City Marine Terminal
NCTD	North County Transit District
NCWRP	North City Water Reclamation Plant
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NEVP	North Embarcadero Visionary Plan
NGOs	nongovernmental organizations
NHTSA	National Highway Traffic Safety Administrative
NIMS	National Incident Management System
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO ₂	Nitrogen Dioxide
NOAA	National Oceanic and Atmospheric Administration
NOLF	Naval Outlying Landing Field
NOLF-IB	Naval Outlying Landing Field-Imperial Beach
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Parks Service's
NRHP	National Register of Historic Places
NSR	New Source Review
NTR	National Toxics Rule
NWR	National Wildlife Refuge
O ₃	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OGV	Ocean-Going Vessel
OGVs	ocean going vessels
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbons
PAHs	polycyclic aromatic hydrocarbons
Pb	Lead
PCBs	polychlorinated biphenyls
PCTs	polychlorinated terphenyls
PD	planning district
PDPs	Priority Development Projects

PDs	planning districts
PEIR	Program Environmental Impact Report
PFCs	perfluorinated carbons
PLWTP	Point Loma Wastewater Treatment Plant
PM	particulate matter
PM ₁₀	Respirable Particulate Matter
PM _{2.5}	particulate matter less than or equal to 2.5 microns in diameter
PMP	Port Master Plan
PMPA	Port Master Plan Amendment
PMPU	Port Master Plan Update
Port Act	San Diego Unified Port District Act
Portside Community	Community of Portside Environmental Justice Neighborhoods
ppb	parts per billion
ppm	parts per million
PPV	Peak Particle Velocity
PRC	Public Resource Code
psi	pounds per square inch
PUD	Public Utilities Department's
RAQS	Regional Air Quality Strategy
RCNM	Roadway Construction Noise Model
RCPs	Representative Concentration Pathways
RCRA	Resource Conservation and Recovery Act of 1976
Regional Bike Plan	Riding to 2050, the San Diego Regional Bike Plan
Regional Plan	<i>San Diego Forward: The Regional Plan</i>
RES	Regional Energy Strategy
RHMP	Regional Harbor Monitoring Program
RMI	Rohr Marine Incorporated
rms	root-mean-square
RoRo	roll-on/roll-off
RPS	Renewables Portfolio Standard
RTCIP	Regional Transportation Congestion Improvement Plan
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel-Efficient
SAM	Site Assessment and Mitigation
SANDAG	San Diego Association of Governments
SAP	Sampling Analysis Plan
SB	Senate Bill
SBIWTP	South Bay International Wastewater Treatment Plant
SBWRP	South Bay Water Reclamation Plant
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCCWRP	Southern California Coastal Water Research Project

SCH	State Clearinghouse and Planning Unit
SCIC	South Coastal Information Center
SCP	Site Cleanup Program
SCS	Sustainable Communities Strategy
SD&A	San Diego and Arizona
SD&AE	San Diego and Arizona Eastern
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDC	Seismic Design Category
SDCC	San Diego Convention Center
SDCOE	San Diego County Office of Education
SDCRAA	San Diego County Regional Airport Authority
SDFD	San Diego's Fire-Rescue Department
SDG&E	San Diego Gas & Electric
SDIA	San Diego International Airport
SDPD	City of San Diego Police Department
SDRC	San Diego Rowing Club
SDUSD	San Diego Unified School District
SEMS	Superfund Enterprise Management System
SEMS	Standardized Emergency Management System
SEP	State Energy Plan
SERC	State Emergency Response Commission
SF6	sulfur hexafluoride
SFHA	special flood hazard area
SHPO	State Historic Preservation Officer
SIC	standard industrial codes
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLCP	Short-Lived Climate Pollutant
SLIC	Spills, Leaks, Investigation and Cleanup
SLM	sound level meters
SLR	sea-level rise
SLR	sea level rise
SLT	screening-level threshold
SO ₂	Sulfur Dioxide
SOI	Secretary of the Interior's
Solar	Solar Turbines
SOPs	standard operating procedures
SO _x	sulfur oxide
SPAWAR	Space and Naval Warfare Systems
SPCC	Spill Prevention Control and Countermeasure
SPL	sound pressure level
SR-	State Route

SSMP	Sewer System Management Plan
SSOs	Sanitary Sewer Overflows
ST	short-term
STC	Sustainable Terminal Capacity
STRAHNET	Strategic Highway Network
SUHSD	Sweetwater Union High School District
Sustainable Freight Action Plan or Action Plan	Sustainable Freight Action Plan
SVOCs	semi-volatile organic compounds
SWCSs	stormwater control systems
Sweetwater	Sweetwater Authority's
SWPPP	Storm Water Pollution Prevention Plan
SWQMP	Storm Water Quality Management Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAMT	Tenth Avenue Marine Terminal
TAZ	Transportation Analysis Zone
TBT	tributyltin
TCRs	tribal cultural resources
TDM	Transportation Demand Management
TDS	Total Dissolved Solids
TDY	Teledyne Ryan
Technical Advisory	Technical Advisory on Evaluating Transportation Impacts in CEQA
TIA	Transportation Impact Analysis
Tidelands	District lands, tidelands, and submerged lands
TIS	Traffic Impact Study
TIS	Transportation Impact Study
TMA	transportation management area
TMDL	total maximum daily load
TPA	Transit Priority Area
TPH	total petroleum hydrocarbons
TSS	Threshold Siting Surface
UP	Union Pacific Railroad
US&R	urban search and rescue
USACE	U.S. Army Corps of Engineers
USC	United States Code
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

USIBWC	United States Section of the International Boundary and Water Commission
UST	underground storage tank
UWMP	Urban Water Management Plan
UWMPA	Urban Water Management Planning Act
VAP	Voluntary Action Program
VAP	Voluntary Assistance Program
VHFHSZs	very high fire hazard severity zones
VMT	vehicle miles traveled
VOC	volatile organic compound
VSR	vessel speed reduction
Water Authority	San Diego County Water Authority
WDRs	Waste Discharge Requirements
WERs	water effect ratios
WHO	World Health Organization
WML	West Miramar Landfill
WoS	waters of the state
WoUS	waters of the United States
WPA	Works Progress Administration
WQIP	Water Quality Improvement Plan
WSCP	Water Shortage Contingency Plan
ZEV	zero-emission vehicle
ZNE	Zero Net Energy

Port Master Plan Glossary

Term	Definition
Accessory Use	A use of land or building, or portion thereof, that is customarily incidental to, related to, or clearly subordinate to a primary use or secondary use of the land or building located on the same premises. Accessory uses are distinguished from secondary uses in that an accessory use has a relationship to a primary or secondary use, whereas a secondary use may be independent of and have little to no relation to a primary use.
Accessway	A route by water or land that provides access to or through a destination. Examples of accessways include, but are not limited to, roadways, rail, pathways, bikeways, and navigation corridors. Refer to Figure 3.2.2 Accessway Hierarchy in (Chapter 3.2, Mobility Element).
Accommodate	To have or provide.
Accommodating	Supporting or sustaining.
Achieve	To carry out and meet stated policy or action.
Activating Feature	Attract visitors to, and extend users stay on Tidelands. May involve temporary or permanent activities and/or structures or amenities. Activating commercial features host small-scale commercial enterprises and serve visitors and the community. These features include, but are not limited to, carts, kiosks, stands, and pavilions for food service, retail, or other small-scale commercial, leisure or hospitality activities. Activating non-commercial features are structures or amenities designed for enhancing the public's use or enjoyment of open space. These features include, but are not limited to, furnishings or structures that offer shade or host interactive activities such as performance, entertainment, education, games, play, exercise, or similar activities. Shade structures are not considered an activating feature.
Activation Plan	An activation plan provides a framework and guidance for planning and programming of recreation open space for diverse human activity. The focus of place activation is on ensuring the needs of all potential users are met.
Active Uses	A use that involves participation, movement, or engagement in an activity.
Adaptation	Adjustment in natural or human systems to a new or changing environment. For example, adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
Address	To direct the efforts or attention.
Adhere	To act based on rules or agreements that are upheld.
Adjacent Jurisdictions	Local, state, or federal agencies or municipalities whose jurisdictional boundaries are located adjacent to the District.
Allow	To give permission to have or do something.
Amenity	Facilities or furnishings that provide comfort, convenience, or enjoyment.
Amenity Zone	An area intended to improve comfort, convenience, or enjoyment, by providing a variety of facilities or street furnishings, such as pedestrian seating, trash receptacles, and signage.

Term	Definition
Anchorage Area	Space for vessels to anchor with sufficient area for natural movement during mooring and with sufficient access to navigable waters.
Appealable	Section 30715 in Chapter 8 of the Coastal Act provides a list of categories of development that may be appealed by the CCC. Development that is considered within one of these category types is referred to as “appealable,” and development that is not considered one of these category types is referred to as “non-appealable.” Refer to WLU Goal 1 (Chapter 3.1, Water and Land Use Element) for more information on development types and categories.
Aquaculture	Aquaculture, also known as fish, shellfish, or algae/seaweed farming, refers to the propagation, cultivation, maintenance, and harvesting of marine plants and animals in all types of water environments including ponds, rivers, lakes, the ocean and man-made “closed” systems on land. Aquaculture includes the production of food fish, sport fish, bait fish, ornamental fish, crustaceans, mollusks, algae, sea vegetables and other marine plant species, and fish eggs for the aquarium trade and in a range of food, pharmaceutical, nutritional or biotechnology products. Aquaculture is a priority coastal-dependent use, as described in the Coastal Act. Aquaculture may include the production of seafood from hatchery fish and shellfish which are grown to market size in ponds, tanks, cages, or raceways. Stock restoration or “enhancement” is a form of aquaculture in which hatchery fish and shellfish are released into the wild to rebuild wild populations or the creation of habitats to support native populations, such as oyster reefs. Fish laboratories and testing, as well as fish offloading/transshipment are also important aspects of aquaculture.
Artifacts	Objects or items characteristic of, or resulting from, a particular human institution, period, trend, or individual and may be prehistoric or historic.
Assess	To consider in order to make a judgement about.
Assessment District	Areas organized for the purpose of aiding in the development or improvement allowing for the collection of special assessments to finance public improvements.
Attractions	Places whose main purpose is to allow public access for entertainment, interest, or education. May include heritage, amusement/entertainment, recreation, or commercial. Activating features are similar to attractions, but with a size threshold for structures.
Avoid	To act in order to prevent something from occurring.
Barge	A large, flat-bottomed boat used to carry cargo from a port to shallow-draft waterways.
Basin	The catchment area of an abiotic compartment of Earth, usually associated with the hydrosphere or atmosphere (e.g. river basin or air basin).
Bayfront	An area of land adjacent to San Diego Bay.
Bayshore Bikeway	A regional corridor for use by cyclists that is planned to extend 24 miles around San Diego Bay, providing a physical and scenic connection to major bayfront employers, as well as tourist and recreational destinations. The SANDAG Bayshore Bikeway Plan provides guidance for the multi-agency and multi-jurisdictional effort.
Baywide Circulator	This is a mobility concept advanced in this Plan. It is anticipated that the summer shuttle will be upgraded to provide year-round service (aka bayfront circulator) and operate along Harbor Drive, establishing connections between Shelter Island and the San Diego Convention Center.

Term	Definition
	This Plan is agnostic to specific technology, so that it can include multiple forms of transportation technology (e.g., bus, automated people mover, fixed guideways, etc.).
Beneficial Use [Water]	Pursuant to the Porter-Cologne Water Quality Control Act, designations assigned to water bodies of the state that may be protected against quality degradation. In the San Diego Region, Beneficial Water Uses, including water quality objectives and implementation plans to protect those uses, are established by the California Water Quality Control Board, San Diego Region's Water Quality Control Plan for the San Diego Basin (Basin Plan). In the Pacific Ocean, Beneficial Water Uses include: contact water recreation; non-contact water recreation; wildlife habitat; industrial service supply; navigation; commercial and sportfishing; preservation of biological habitats of special significance; rare, threatened, or endangered species; marine habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; shellfish harvesting; and aquaculture. In San Diego Bay, Beneficial Water Uses include: contact water recreation; non-contact water recreation; wildlife habitat; industrial service supply; navigation; commercial and sport fishing; preservation of biological habitats of special significance; rare, threatened, or endangered species; estuarine habitat; marine habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and shellfish harvesting.
Berth	The place primarily for a ship or boat when at anchor, a slip, or dock. A berth may also serve as a place for a barge, dry dock, or floating upweller system.
Best Available Science	The informational, scientific standard followed for decision making for an applicable process for a specific discipline.
Best Management Practices	A best practice is a method or technique that has been generally accepted as superior to any alternatives, because it produces results that are superior to those achieved by other means or because it has become a standard way of doing things, e.g., a standard way of complying with legal or ethical requirements.
Bike Lanes	A type of dedicated bike facility. Bike lanes are one-way facilities located on either side of a roadway. They provide a striped lane designated for the exclusive or shared of bicycles.
Bikeway	Right-of-way and/or a transportation facility that is dedicated to bicycles or nonmotorized micro-mobility vehicles.
Biodiversity	The number and variety of species found within a specified geographic region. The variability among living organisms on the earth, including the variability within and between species and within and between ecosystems.
Biologically Engineered	Application of engineering principles to analyze and design biological systems and technologies.
Blue Economy	The sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of the ocean.
Boat (Yacht) Brokerage	A business representing yacht or boat sellers and/or buyers during sale or purchase of the boat, parts, and/or equipment.
Boat Launch Ramp	A developed slope between the shore and the water by which vessels or boats can be moved to and from the water.

Term	Definition
Build	To construct, assemble, erect, convert, enlarge, reconstruct, or structurally alter a building or structure.
Building Base	The lower portion of a building located immediately above grade.
California Coastal Plan	As defined in the Coastal Act, Section 30102: "Coastal plan" means the California Coastal Zone Conservation Plan prepared and adopted by the California Coastal Zone Conservation Commission and submitted to the Governor and the Legislature on December 1, 1975, pursuant to the California Coastal Zone Conservation Act of 1972 (commencing with Section 27000). For background on this coastal plan, prior to the passage of the California Coastal Act in 1976, the State of California adopted a Coastal Initiative (Proposition 20) in 1972 that established temporary regional coastal commissions and one statewide commission. These commissions were tasked with preparing a coastal plan with coastal policy and planning recommendations for the State. The California Coastal Zone Conservation Plan was completed in 1975 and many of these recommendations were brought forward into the California Coastal Act, including the establishment of the California Coastal Commission. Part IV of the 1975 Coastal Plan provided specific policy recommendations to each region, with accompanying maps, identifying various landmarks and coastal resources. These maps are referred to in Chapter 8 (titled "Ports") of the Coastal Act for identifying wetland, estuary, or existing recreation areas in the coastal zone."
Cantilevered Promenade	A pathway along the water's edge designed to project over the water, allowing for enhanced access and enjoyment of Tidelands.
Carbon Neutrality	Carbon neutrality means annual zero net anthropogenic (human caused or influenced) carbon dioxide emissions.
Catastrophic Event	Tornadoes, hurricanes, earthquakes, tsunamis, unintentional fire, flooding, other acts of nature, terrorism, unintentional hazardous accidents, and other unintentional human-made incidents that severely damage or destroy structures, infrastructure, roads, or other components of the built environment that make such development or any portion thereof or not occupiable or usable for its intended purpose. Economic or fiscal conditions or market fluctuations shall not constitute a catastrophic event.
Clean Transportation and Sustainable Freight Strategies	Strategies fostering improving freight efficiency, transition to zero-emission vehicles and technologies, and increasing the competitiveness of freight systems.
Climate	The meteorological conditions, including temperature, precipitation, and wind, that characteristically prevail in a region.
Climate Change	A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer.
Coastal Act Approval	A CDP or Coastal Act exclusion issued by the District or alternatively issued by the CCC for an appealed Coastal Act approval.
Coastal-Dependent Development or Use	Any development or use which requires a site on, or adjacent to, the sea (or Bay) to be able to function at all. (Coastal Act Section 30101).
Coastal Development Permit	A permit for any development within the Coastal Zone that is required pursuant to subdivision (a) of Section 30600 of the Coastal Act and as applicable to ports pursuant to Chapter 8 of the Coastal Act.

Term	Definition
Coastal-Enhancing Development or Use	Any development or use that is not inherently or physically dependent on access to the water but may benefit or be more attractive by virtue of being in proximity to water. Uses draw from the coastal dependent and coastal related use activities as well as from other activities. Coastal-enhancing uses, while not a formal Coastal Act category, are a use category that has been carried forward in the Plan since it was originally certified by the CCC in 1981. Examples include restaurants, hotels and public recreation areas providing facilities for golf, field sports, and passive recreation.
Coastal Flooding	Flooding resulting from a coastal process—such as waves, tides, storm surge, or heavy rainfall from coastal storms.
Coastal Habitat	Habitats above spring high tide limit (or above mean water level in non-tidal waters) occupying coastal features and characterized by their proximity to the water.
Coastal Hazard	Natural hazards that adversely impact the coastline, including but not limited to coastal erosion, coastal flooding, extreme monthly tidal inundation, sea level rise, wave run-up.
Coastal Hazard Area	An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources.
Coastal-Related Development or Use	Any development or use that is dependent on a coastal-dependent development or use (Coastal Act Section 30101.3).
Coastal Zone	Land and water area of the State of California from the Oregon border to the border of the Republic of Mexico, specified on the maps identified and set forth in Section 17 of that chapter of the Statutes of the 1975-76 Regular Session enacting this division, extending seaward to the state's outer limit of jurisdiction, including all offshore islands, and extending inland generally 1,000 yards from the mean high tide line of the sea. In significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas of the zone generally extends inland less than 1,000 yards. The coastal zone does not include the area of jurisdiction of the San Francisco Bay Conservation and Development Commission, established pursuant to Title 7.2 (commencing with Section 66600 of the Government Code, nor any contiguous thereto, including any river, stream, tributary, creek, or flood control or drainage channel flowing into such area (Coastal Act Section 30103).
Co-Benefit	The positive effects that a policy or measure aimed at one objective might have on other objectives, thereby increasing the total benefits (for the public or the environment).
Collaborate	To partner in aspects of a decision including the development of alternatives and the identification of a preferred solution.
Commerce	Activities and procedures involved in buying and selling goods or services.
Commercial Fishing	Fishing duly authorized under applicable state and federal laws or regulations, in which fish, or other seafood, wild harvested, either in whole or in part, are intended to enter commerce or enter commerce through sale, barter, or trade.
Commercially Operated Passenger Vessels	Vessels that carry multiple paying passengers for bay- and/or ocean-related activities.

Term	Definition
Conservation	The protection and management of natural resources that best reflect environmental stewardship for present and future generations.
Connection Points	Facilitate the transition from one mobility mode to another, including between water and land mobility modes.
Conservation Areas	Geographic locations or extents designated or dedicated to the act of conserving.
Conserve	To protect from loss, harm, and/or wastefulness.
Consider	To look at carefully or to think about in order to understand or decide.
Consultation	Solicitation and consideration of an agency's comments, suggestions, or input. (Consultation is not synonymous with "agreement" regarding an agency's comments or suggestions.)
Contribute	To give support or money for a common purpose or fund.
Coordination	More than just consultation and involves some level of cooperation. Taking a stakeholder's recommendations into account and incorporating (where possible) to avoid or reduce conflicts.
Courtyard	An open area of ground which is mostly surrounded by buildings or walls.
Create	To be the cause of establishment or to cause something to come into existence.
Criteria Air Pollutant	Six common air pollutants regulated by the U.S. Environmental Protection Agency per the Clean Air Act: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide.
Cultural History	The history of a culture or cultural area.
Cultural Use	Programming, production, presentation, and exhibition of any of the arts and cultural disciplines.
Curbside Management	Programed organization and the physical treatment of dedicated stretches of curb lengths, designed to better manage and optimize the operations for a variety of users and mobility types who all require the use of the same curb space, ultimately utilizing space more efficiently or dedicating space to other uses other than single-occupancy vehicle parking.
Cycle Track	A bikeway for the exclusive use of bicycles, along a roadway that provides vertical and horizontal separation from vehicular traffic. Cycle tracks have different forms, but all share common elements—they provide space that is intended to be exclusively or primarily used for bicycles and are separated from vehicular travel lanes. In situations where on-street parking is allowed cycle tracks are located to the curbside of the parking (in contrast to bike lanes).
Dedicated Bike Area	Right-of-way and/or a transportation facility that is solely dedicated to bicycles. Dedicated bike facilities include bike lanes and cycle tracks.
Dedicated Lanes	Travel lanes or right-of-way within the roadway that are solely dedicated for a specific mode. For example, a dedicated transit lane would be solely dedicated for the use of public transit vehicles, including, but not limited to, buses, street cars, and trolleys.
Deep-Water Berth	A place with sufficient depth of water for the access and usage of very large and heavily loaded ships to loading and unload.
Deep-Water Dependent	Any development or use which requires a site on, or adjacent to, deep water to be able to function at all.
Demolition	The razing, removal, deconstruction, salvaging, or wrecking of portions or all the exterior of a structure or building by hand, with heavy equipment,

Term	Definition
	by explosives or other means where a demolition permit or similar permit is required.
Design	To create, fashion, execute, or construct according to plan.
Destination	The place toward which someone or something is going or a place of arrival.
Develop	To grow or cause to become more physically active, advanced, or changed.
Development	On land, in or under water connected to submerged lands, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or modification of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511) [California Coastal Act 30106].
Development Setback	A setback from the landside edge of a promenade (or similar pathway) and the building face.
Development Site	An individual lease premises or as determined by the District, collectively, individual lease premises or portions of land and/or water that functions collectively as one experience or development.
Development Standards	Specific requirements for structures, facilities, and buildings. These may include but is not limited to criteria such as minimum and maximum widths, heights, square footages, and setbacks.
Disadvantaged Community	Pursuant to SB 1000 (Levy, 2016), the definition of “disadvantaged communities is: an area identified by the California Environmental Protection Agency pursuant to Section 39711 of the Health and Safety Code or an area that is a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation. This Plan encompasses not only the definitions contemplated by SB 1000, but also to include other low-income and minority populations, that are disproportionately burdened by or less able to prevent, respond, and recover from adverse environmental impacts. Refer to Section 3.5.2 (Chapter 3.5, Environmental Justice Element) for more information.
Disaster	Severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic or environmental effects that require immediate emergency response to satisfy critical human needs and that may require external support for recovery.
Disaster Mitigation	Processes for designing, implementing, and evaluating strategies, policies, and measures to improve the understanding of disaster risk, foster disaster risk reduction and transfer, and promote continuous improvement in disaster preparedness, response, and recovery practices, with the explicit

Term	Definition
	purpose of increasing human security, well-being, quality of life, and sustainable development.
Displacement	To remove and move a use or structure from its place or position.
District Tidelands or Tidelands	The District's territory or jurisdiction as defined the San Diego Unified Port District Act, Section 5: (a) The area within the district shall include all of the corporate area of each of the cities of San Diego, Chula Vista, Coronado, National City, and Imperial Beach which establish the district as provided in this act, and any unincorporated territory in the County of San Diego contiguous thereto, which is economically linked to the development and operation of San Diego Bay, included in the district by the board of supervisors of the county as provided in this act. The regulatory, taxing, and police power jurisdiction of the district, as otherwise provided for in this act, shall apply to the above-described area. (b) In addition to the powers and authority describe in subdivision (a), the district shall exercise its land management authority and powers over the following areas: (1) The tidelands and submerged lands granted to the district pursuant to this act of any other act of the Legislature. (2) Any other lands conveyed to the district by any city of the County of San Diego or acquired by the district in furtherance of the district's powers and purposes as provided in Section 87 [of the San Diego Unified Port District Act]. Additionally, after acquired tidelands and exchanged lands are considered District Tidelands.
Dock	A platform extending from a shoreside facility over water, used to secure, protect, and provide access to a boat or ship.
Dock and Dine	Temporary berthing at a dock or pier to patronize an adjacent or adjoining restaurant
Docking	The act of securing a ship, boat, or barge to a dock.
Drought-tolerant	The ability of a plant to live, grow, and reproduce satisfactorily with limited water supply in the context of existing plant climate for an area/region.
Dry Bulk	A commodity type that includes, but is not limited to, minerals, fertilizing materials, sand and gravel, and cement, which is transported in large quantities.
Dry Dock	A narrow basin or vessel that can be flooded to allow a boat or ship to be floated in, then drained to allow that boat or ship to come to rest on a dry platform.
Dry Dock Service	Activity that may occur in or out of water and include, but are not limited to, vessel building, dockside facilities maintenance, and repair services. Activities associated with this use involve lifting vessels out of the water for inspection, maintenance, and repair, as well as undocking after completion of work.
Easement	An easement is a real estate ownership right granted to a third-party individual or entity to make a limited use of the land of another.
Ecological Buffer	An upland, wetland, and/or riparian area that protects and/or enhances biological resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses (33 Code of Federal Regulations 332.2)
Ecology	The relationship between plants, animals, people, and their environment, and the balance of these elements within the ecosystem.
Ecoregion	Ecoregions are areas where ecosystems (and the type, quality, and quantity of environmental resources) are generally similar. Designed to serve as a spatial framework for the research, assessment, and monitoring of

Term	Definition
	ecosystems and ecosystem components, ecoregions denote areas of similarity in the mosaic of biotic, abiotic, terrestrial, and aquatic ecosystem components with humans being considered as part of the biota.
Ecosystem	A unit of land or water comprising populations of organisms (including humans) considered together with their physical environment and the interacting processes between them.
Ecosystem Service	Ecological processes or functions having monetary or non-monetary value to individuals, the environment, or society at large. These are frequently classified as (1) supporting services such as productivity or biodiversity maintenance, (2) provisioning services such as food or fiber, (3) regulating services such as climate regulation or carbon sequestration, and (4) cultural services such as tourism or spiritual and aesthetic appreciation.
Eco-Tourism	Travel to areas of natural or ecological interest for the purpose of observing wildlife and learning about the environment.
Educate	To teach something over a set time period, so that knowledge and understanding is acquired by others.
Effective Date	As to the Port Master Plan Update, once the process codified in 14 California Code of Regulations 13632, subsection (e), as may be amended, is completed
Emergency	A sudden, urgent, usually unexpected occurrence or occasion requiring immediate action.
Emerging market	An economy structured on new technology, standards, increasing access, and revised regulations.
Enable	To make possible or allow for something to occur.
Encourage	To stimulate something/someone by approval or help.
Encroachment	Any obstruction or protrusion into a right of way or adjacent property, whether on the land or above it.
Engage	To take part or participate; or to involve a person's attention intensely.
Enhance	To improve or increase in quality or value.
Ensure	To make certain.
Environmental Justice	Environmental justice means the fair treatment and meaningful involvement of all people regardless of race, color, national origin, culture, education, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Refer to Chapter 3.5, Environmental Justice Element for more information.
Environmental Sensitive Area	Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.
Establish	To begin or create something such as a program, activity, or use.
Estuary	Partially enclosed body of water where river/fresh and ocean/salt/tidal waters mix.
Evaluate	To find or judge the quality or value of something.
Existing Development Site	A development site that is present as of the date of certification of this Plan (amended XXXX).
Expand	To increase in extent, size, or scope.
Explore	To examine or investigate systematically.

Term	Definition
Extreme Monthly Tidal Inundation	Inundation experienced during monthly highest high tide.
Facility	Buildings, structures, pieces of equipment, or other physical systems.
Fair share (in terms of cost sharing)	Equitable distribution of costs amongst entities necessitating or benefiting from the improvements incurring those costs.
Fault Line setback	Distance established between a known fault line and where habitable structures may be built.
Feasible	Capable of being accomplished in a successful manner within a reasonable period of time, considering economic, environmental, social, and technological factors.
Fill	Earth or any other substance or material, including pilings placed for the purposes of erecting structures thereon, placed in a submerged area.
Finished Grade	The final elevation and contour of the ground after cutting or filling and conforming to the proposed design.
Fish Laboratory and Testing	Facility containing laboratory testing equipment in support of marine research to ensure the health of marine species.
Fishery	The industry or occupation devoted to the catching, processing, or selling of fish, shellfish, or other marine or aquatic animals.
Floating Upweller System	Mechanical, water-based, floating structure that relies upon upwelling.
Freight	Goods, excluding passengers, carried by a vessel or vehicle, especially by a commercial carrier; cargo.
Freight Hub	Major airport, seaport, or other type of intermodal facility developed to exchange freight between different vessels or modes of transport.
Garden Space	A garden space is a non-programmed outdoor area that is primarily soft surfaced with ample seating and extensive planted areas. Garden spaces are intimate, nonprogrammed spaces intended as respite from more heavily programmed open spaces located throughout the waterfront.
Gateway/Entry Gateway	[A]n entrance corridor that heralds the approach of a new landscape and defines the arrival point as a destination.
General Use Travel Lanes	Portion of roadway for the movement of vehicles exclusive of shoulders, berms, sidewalks, and parking areas.
Goal	A goal is a broad statement that guides action, in accordance with the District's vision for the Tidelands.
Golf Course	The grounds where the game of golf is played.
Greenhouse Gas (GHG)	Gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of terrestrial radiation emitted by the Earth's surface, the atmosphere itself and by clouds.
Green Infrastructure	The range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to surface waters.
Habitat	The place or environment where a plant or animal naturally or normally lives and grows.
Habitat Enhancement	Areas where activities are conducted within existing natural habitats to achieve specific management objectives or provide conditions which

Term	Definition
	previously did not exist, and which increase or improve one or more ecosystem functions.
Habitat Replacement	An approach to manipulating habitat conditions in which a habitat is converted from one type to another in order to mimic a desirable natural habitat present at another location.
Habitat Restoration	Returning certain habitats to their former historical condition.
Hand-Launched Non-Motorized Watercraft	Watercraft that does not have or utilize a motor to travel along the water. This type of watercraft does not require the use or assistance of vehicle or additional equipment when being launched into the water from the land.
Hazard	The potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, service provision, ecosystems, and environmental resources.
Height	The distance from the base of something to the top, measured from the ground up.
Identify	To discover, prove, or recognize as being a certain person, cause, or thing, often through an analytical process.
Impact	The effect of any direct man-made or natural actions or indirect repercussion of man-made or natural actions on existing physical, social, or economic conditions and communities.
Implement	To carry into effect; or to enact a document of steps or a scheme of action to ensure attainment of identified planning, development, environmental quality, or other standards within a specific time period.
Include	To add as part of the whole.
Increase	To make or become greater in size, degree, or frequency.
Indigenous	Produced, growing, living, or occurring natively or naturally in a region or environment.
Integrate	To add or bring parts together
Integrated Planning	A multi-faceted, collaborative planning process considering economic, social, and cultural opportunities
Intensification (as in increased density or intensity)	The development of a property, site or area at a higher density than currently exists, through development, redevelopment, infill and expansion or conversion of existing buildings.
Intertidal	The area along the shore that is intermittently submerged and exposed due to tidal flows, which change daily and seasonally due to the gravitational pull of the moon and the sun.
Invasive Species	Any kind of living organism that is not native to an ecosystem and causes harm.
Invest	To devote time, effort, or resources to a project, process, or initiative considered to useful or likely to succeed.
Involve	To work directly with the stakeholders throughout a process to ensure that concerns and aspirations are consistently understood and considered.
Kiosk	A small building or structure from which people can buy items, goods, or services.
Landward	Towards land (away from water).
Land Use Type	A type of development or activity occurring on the land within a specified land use designation.

Term	Definition
Lease	A written agreement by and between the District and a third-party for use of District Tidelands or other granted lands or water that complies with all applicable regulations and laws. For avoidance of doubt, leases include, but are not limited to ground leases, leases, Tideland Use and Occupancy Permit, Right of Entry Permit, or any subleases requiring District consent.
Lessee	The third-party or entity that has legally entered a lease with the District.
License Agreement	A written agreement by and between the District and a third-party that gives the third-party permission to use Tidelands but does not grant the third-party any real property interest in Tidelands. A license agreement may be revocable or irrevocable.
Leverage	To utilize resources or other means of ability to influence situations or people to accomplish some purpose
Linkage	The connection of two (or more) things.
Liquid Bulk Handling (receipt and distribution)	The physical transfer and storage of liquid bulk from vessels to vessels or freight to vessel through pipelines. This may also include bunkering and storage.
Listed Species	A species designated as candidate, threatened, or endangered pursuant to the California Endangered Species Act and/or listed as threatened or endangered under the Federal Endangered Species Act.
Living Shorelines	Constructed features that can be incorporated into shoreline protection that may mimic natural features of a shoreline to provide specific adaptation or ecological services, such as but not limited to, protection, dissipation of wave energy, and biological enhancements.
Locate	To designate the site of.
Logistics and Supply Chain Support Services	Processing, administration, maintenance, or repair facilities supporting cruise terminal or cargo terminal operations of transporting cargo and people.
Long-Term Leases	A lease with term of five years or more in duration.
Lower Cost Visitor and Recreational Facilities	Facilities that are intrinsically lower cost or no cost, which may include, but are not limited to: public recreational opportunities such as active and passive parks, open space, gardens, promenades, walkways, and bikeways/bike paths; wayfinding signage, seating, bicycle racks and other enhancements to public access areas; free or lower-cost public events or tours; public art, museums or exhibits; public viewing areas or piers; free or lower cost transportation, including shuttles, van pools, water taxis and bicycle racks; public fishing piers or floating docks; low cost or free moorings or boat slips; dock and dine piers; parking facilities/spaces that are free or lower cost; overnight accommodations with kitchenettes, free wi-fi, free or reduced cost breakfast, and free parking; campgrounds, yurts, or tent campsites that are intrinsically lower cost.
Maintain	To keep in functional and operating condition by regularly checking it and repairing it when necessary.
Major Development	Cumulative modification or cumulative replacement of 50 percent or more of a single major structural component of an existing development; or Cumulative modification or cumulative replacement of 50 percent or more of the sum total of all major structural components of a single existing development or multiple existing developments on an existing development site; or Issuance of a term extension or cumulative term extensions, after the effective date of the Port Master Plan Amendment,

Term	Definition
	that equal to fifteen (15) years or more; or Granting of a new lease of more than ten (10) years; or Issuance of a new Coastal Development Permit for new development.
Major Structural Component(s)	The foundation, floor framing, exterior wall framing and roof framing of a structure. Exterior siding, doors, window glazing, roofing materials, decks, chimneys, and interior elements including but not limited to interior walls and sheetrock, insulation, fixtures, and mechanical, electrical and plumbing elements are not considered major structural components.
Marine Research	Any study, whether fundamental or applied, intended to increase knowledge about the marine environment, including its resources or living organisms through scientific-based activity.
Marine Technology	Any technology, system, or platform that: <ul style="list-style-type: none"> • is designed for use or application above, on, or below the sea surface or that is otherwise applicable to maritime operational needs, including such a technology, system, or platform that provides continuous or persistent coverage; and • supports or facilitates: <ul style="list-style-type: none"> • maritime domain awareness, including: • surveillance and monitoring; • observation, measurement, and modeling; or • information technology and communications; • search and rescue; • emergency response; • marine inspections and investigations; or • protection and conservation of the marine environment.
Maximize	To increase to the maximum or to raise to the highest possible amount of degree.
Merchant Marine	United States civilian mariners and merchant vessels that engage in commerce or goods transportation and services in and out of United States' navigable waters. In times of war, the United States Merchant Marine can be called upon to deliver military personnel and material for the military.
Micromobility	Personal transportation using any vehicles whose gross weight is less than 500kg.
Mid-Block Pedestrian Crossing	A pedestrian roadway crossing that is not adjacent to, or aligned, with a controlled intersection. May or may not be aligned with a walkway.
Minimize	To reduce to a minimum or to decrease to the least possible amount.
Minor Development	All other development that is not major development (See Major Development).
Mitigation Banking	A wetland, stream, or other marine or coastal resource area that has been restored, created, enhanced, or (in certain circumstances) preserved for providing compensation for unavoidable impacts to marine or coastal resources permitted under Section 404 of the Clean Water Act or a similar state or local wetland regulation. A mitigation bank may be created when a government agency, corporation, nonprofit organization, or other entity undertakes these activities under a formal agreement with a regulatory agency.
Mobile Fueling Systems	Fueling apparatus that can re-locate to areas of need for fueling purposes for both land vehicles and water vessels.

Term	Definition
Industrial and Deep Water Berthing (This should be deleted)	Water areas primarily dedicated to ship berthing directly adjacent to berths. This designation supports the Marine Terminal, Visitor-Serving Marine Terminal, and Maritime Services and Industrial land use designations, with functional dependencies on direct access to, or association with, deep-water berthing and allows other supporting primary and secondary water uses or facilities.
Mobility Hub	A connection point in which visitors and workers are provided the opportunity to change from one mode of travel to another, as necessary, to reach their destination. A mobility hub includes, but is not limited to, landside modes such as personal auto; transit; rideshare; biking; walking; micro-mobility options; as well as waterside modes such as transient docking and water-based transfer points that support a water-based transit network, such as water taxis and/or ferries.
Modification (or Replacement) of Structural Component Cumulative Threshold to be Major Development (See Major Development)	<p>Exterior Wall Modification or Replacement. An exterior wall is considered to be modified 50 percent or more when any of the following occur:</p> <ul style="list-style-type: none"> • Exterior cladding and/or framing systems are altered in a manner that requires removal and/or replacement of 50 percent or more of the elements of those cladding and framing systems, normally considered as linear length of wall; or • Reinforcement is needed for any remaining portions of the wall to provide structural support in excess of 50 percent of existing support elements (e.g., addition of 50 percent or more of beams, shear walls, or studs whether alone or alongside the existing/retained elements, etc.). • Floor or Roof Structure Modification or Replacement. A floor or roof structure is considered to be modified 50 percent or more when any of the following occur: <ul style="list-style-type: none"> • The roof or floor framing is altered in a manner that requires removal and/or replacement of structural elements (e.g., trusses, joists, shear components, rafters, roof/floor structural surface (e.g., plywood), etc.) supporting 50 percent or more of the square footage of the roof or floor; or • The roof or floor structural framing system requires additional reinforcement to any remaining portions of the roof or floor system to provide structural support (e.g., addition of 50 percent or more of beams, joists, shear components, rafters, roof/floor structural surface (e.g., plywood), etc., whether alone or alongside existing/retained system elements). • Foundation Modification or Replacement. A foundation is considered to be modified 50 percent or more when any work is done on any of the following: <ul style="list-style-type: none"> • 50 percent or more of the horizontal surface area of a slab foundation; • 50 percent or more of the floor area of a structure supported by a pier/post and/or caisson/grade beam foundation; or • 50 percent or more of a perimeter foundation.
Modify	To change or alter.
Mooring	A place where a boat can be tied so that it cannot move away, or the object it is tied to.
Motorized Mobility Device	An electric personal assistive vehicle
Multi-Modal	Characterized by several modes of activity or transportation.
Multi-Use	Intended or suitable for more than one use.

Term	Definition
Multi-Use Pathway	An accessway intended or suitable for more than one mode (e.g., pedestrians and bicycles), such as walking, jogging, cycling, and wheelchair use.
Native Vegetation	Vegetation that is local or endemic to the area and which originated or was produced naturally in the region and not introduced directly or indirectly by humans.
Natural Resources	Land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States, any state or local government, any foreign government, or any indigenous tribe.
Nature Trail	An unpaved walkway.
Navigation	The science of locating the position and plotting the course of ships and aircraft.
Net Zero Carbon Emissions	Net zero carbon emissions is considered a synonym for carbon neutrality.
New Development	Development that occurred after the effective date of this Plan.
Nonconforming Development	A development that was lawfully established, improved or constructed prior to the adoption of certification of this Plan (amended XXXX), but that does not conform with goals, objectives, and policies of this Plan's Elements and the standards and requirements of the applicable Planning District where the development is located.
Nonconforming Use	A use of development, water, or land that was legally established and maintained prior to the adoption and certification of this Plan (amended XXXX) yet does not conform to the amended land and/or water use designation.
Non-Native Species	A species living outside its native distributional range.
Non-Port Administration Office	Establishments that may operate on Tidelands but are not directly related to District operations.
Non-Water Oriented	Uses or actions not principally utilized for water-oriented purposes.
Nurture	Encourage or help to develop (plans ideas, or people).
Objective	A statement of a desired end.
Occupant	The third-party or entity that legally occupies a space on Tidelands.
Offer	To present for consideration.
Open Space, Active	Unobstructed, usable outdoor spaces accessible to the public for the purpose of programmed recreational activities including small and large park events.
Open Space, Passive	Emphasis on the open space aspect of a park and which involves a low level of development, including picnic areas and trails. A generally undeveloped space not intended for programmed recreational activities or small and large park events.
Optimize	To obtain the most efficient or optimum use of
Orient	To position, align or set with reference to points of the compass or other specific directions
Oriented	To be principally devoted to. (See non-water-oriented retail)
Overnight Accommodations	Land or water areas allowing for temporary overnight accommodation rented to a person for less than 180 consecutive days. Examples of overnight accommodations include, but are not limited to, hotels, hostels, and lower cost visitor facilities.

Term	Definition
Parcel	A District-defined piece of real estate.
Park	Open space primarily for recreation and publicly accessible.
Parking District	Defined geographic area within which parking fees are collected and used for parking improvements within that area.
Parkway	Within a street right-of-way, area between the curb and sidewalk, intended for landscaping and tree planting.
Participate	To take part, be or become actively involved, or share in.
Partner	To join together on an effort or initiative.
Partnership	A relationship between two entities that share the responsibility for a project or service delivery.
Paseo	A pedestrian way or plaza located between two adjacent buildings.
Passageway	A long narrow space with walls or fences on both sides, that connects one place with another.
Pathway	A type of accessway solely dedicated for the use of pedestrians. Examples of pathways include, but are not limited to, sidewalks, walkways, and nature trails.
Pavilions	A permanent or temporary structure providing commercial recreational services, retail/restaurant services, concessions, or entertainment.
Pedestrian Scramble	Traffic signal phase that temporarily stops all vehicular traffic from entering an intersection to allow for pedestrians and cyclists to cross the intersection in all directions, including diagonally, at the same time.
Performance Venue	Any establishment (indoors or outdoors) where entertainment, either passive or active, is provided for the pleasure of the patrons, either independent or in conjunction with any other use. Such entertainment includes but is not limited to vocal and instrumental music, dancing, karaoke, comedy, and acting.
Permittee	Any person or entity that is issued a Coastal Act Approval or has applied for a Coastal Act Approval.
Pier	A fixed structure that extends over the water and used as a landing place for vessels. A pier can also be used for other non-landing activities such as, but not limited to, recreation and commercial uses.
Planning District	Identifiable and functional geographic units of the District's jurisdiction. Planning district boundaries conform closely to the boundaries of established municipal jurisdictions and/or census tracts.
Planned Improvements	Planned improvements provide enhanced coastal access to Tidelands, on land and between the water-land interface or define the thresholds for development for appealable projects consistent with the Coastal Act.
Platform	A fixed structure that extends over the water and functions as an extension of land over the water and is used exclusively for non-landing activities such as, but not limited to, recreation and commercial uses. Some platforms have built structures or may be leased. Like a deck, but a platform is always over water or riprap.
Plaza	An open space designed for public use and defined by surrounding buildings and/or streets.
Policy	A policy is a rule or course of action that indicates how a District objective will be achieved.

Term	Definition
Port Master Plan	Carries out the provisions Chapter 8 of the Coastal Act. Contains the proposed uses of land and water areas, where known; the projected design and location of port land areas, water areas, berthing, and navigation ways and systems intended to serve commercial traffic within the area of jurisdiction of the port governing body; and proposed projects listed as appealable.
Port Master Plan Amendment	Formal approved change to the certified Port Master Plan, such an Amendment itself requires certification by the CCC.
Port Master Plan Update	A Port Master Plan Amendment approved by the Board of Port Commissioners on (XXX), certified by the CCC on (XXX) and effective as of (XXXX) (see 14 California Code of Regulations Section 13632).
Portside Community	Communities downwind from industrialized, waterfront uses and activities and tend to have poor air quality. As of certification of this Plan (dated XXXX), Portside Communities included Barrio Logan, Logan Heights, Sherman Heights in the City of San Diego, and West National City.
Preserve	To maintain and protect.
Primary Use	The preferred and dominant use within a water or land use designation. The primary use(s) for which land or a building is or may be intended, occupied, maintained, arranged, or designed.
Prioritize	To designate or treat (something) as more important than other things.
Prohibit	To refuse to allow.
Project	The whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1) an activity directly undertaken by any public agency including but not limited to public works construction and related activities clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700; (2) an activity undertaken by a person or entity which is supported in whole or in part through public agency contacts, grants, subsidies, loans, or other forms of assistance from one or more public agencies; or (3) an activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies (CEQA Guidelines Section 15378). A Project is separate from the ‘Appealable Project List’ as defined by this document; see definition of ‘Appealable’.
Promenade	A public pathway adjacent to the water for leisurely strolling or bicycling.
Promote	To help bring about or further the growth or establishment of; or to further the popularity of by publicizing and advertising.
Protect	To defend from trouble, harm, or loss.
Provide	To make available.
Public Facility	Any area that is owned, leased, or otherwise operated, or funded by a governmental body or public entity, which may, include, but is not limited to, buildings, property, recreation areas, and roads.
Public Open Space	Unobstructed, usable outdoor spaces accessible to the public.
Public Realm	Public realm is defined as the exterior space around and between structures and facilities that are publicly accessible. These areas support or facilitate social interaction and include active and passive uses.

Term	Definition
	While public realm areas may include designated Recreation Open Space areas, they may also include areas within a developed site or leasehold assigned with other use designations, such as Commercial Recreation. Public realm also includes streets, sidewalks, and other accessways that facilitate public access.
Public Transit	A system of transport, in contrast to private transport, for passengers by group travel systems available for use by the general public, typically managed on a schedule, operated on established routes, and that charge a posted fee for each trip.
Public Trust Doctrine	Refers to a common law doctrine creating the legal right of the public to use certain lands and water.
Public-Private Partnership	A partnership between a government agency and private entity that share the responsibility for a project or service delivery.
Pursue	To proceed along, follow, or continue with to try to find or strive for an item or objective.
Rail	A permanent road having a line of rails fixed to ties and laid on a roadbed and providing a track for cars or equipment drawn by locomotives or propelled by self-contained motors.
Recognize	To acknowledge or to be aware of the existence of or significance of.
Reconfiguration	The arrangement or rearrangement of parts into a different form or combination.
Recreation	Activities of leisure.
Recreational Boat Service Facilities	Facilities that provide services to recreational boating necessary for the operation and maintenance of recreational boats or for the comfort of recreational boat users. Such facilities should be located and designed to not interfere with commercial fishing. Facilities may include, but are not limited to, pump outs stations, repairs, fueling, docks, restrooms, and boat launches.
Recreational Marina	Coastal water area designated and used exclusively for the mooring of recreational vessels including mooring slips and service facilities located on mooring slip docks.
Recreational Marina – Related Facilities	Ancillary and supportive uses and areas related to supporting recreational marinas.
Recreational Vehicle & Camping	Areas dedicated for the parking and/or placement of tents, recreational vehicles (i.e. campers, motorhomes, trailers), and motor vehicles for overnight accommodations.
Recreational Vessel	Vessels used for recreational use. Recreational vessels can be motorized or non-motorized. Motorized vessels include but are not limited to jet skis; fly boards; boats; or similar motorized vessels for recreational use. Non-motorized vessels include but are not limited to: kayaks; paddle boats; boards (paddle, stand-up, surf, or similar); or similar non-motorized vessels for recreational use.
Redevelopment	Development on an existing development site.
Regulate	To control, direct, or govern according to a rule, principle, or system.
Remediation (Environmental Remediation)	The removal of pollution or contaminants from environmental media such as soil, groundwater, sediment, or surface water.
Remove	To move something from place or position occupied.
Replace	To provide a substitute or equivalent for what is existing.

Term	Definition
Replace in-kind	To provide a substitute or equivalent.
Require	To ask or insist upon, as by right or authority.
Research	To conduct careful, systematic, patient study and investigation in some field of knowledge, undertaken to discover or establish facts or principles.
Resilience	The capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience.
Restaurant (full-service)	Establishments primarily engaged in providing food services to patrons who order and are served while seated (i.e., waiter/waitress service) and pay after eating.
Restaurant (limited-service)	Establishments primarily engaged in providing food services where patrons generally order or select items and pay before eating.
Retain	To keep in a fixed state or condition.
Retrofit	To change in design, construction, or equipment of an existing facility in order to incorporate later improvements or to bring it into compliance (or where that is not feasible, more nearly into compliance) with modern standards for such facilities.
Roadways	An accessway which allows and is intended to serve vehicular traffic. Examples of roadways include, but are not limited to, general lanes and dedicated lanes for transit or other mobility modes.
Salt Pond	A human-made feature along the coastline that allows for the drying and collection of salt.
Scenic Vista Area	An area of visual public access providing scenic views from publicly accessible points on Tidelands, as depicted on the Planning District Coastal Access: Views and Pathways figures.
Sea Level Rise	Sea level change, both globally and locally (relative sea level change) due to (1) a change in ocean volume as a result of a change in the mass of water in the ocean, (2) changes in ocean volume as a result of changes in ocean water density, (3) changes in the shape of the ocean basins and changes in the Earth’s gravitational and rotational fields, and (4) local subsidence or uplift of the land.
Secondary Use	Complement primary use(s) identified within a water and land use designation but are not the preferred use and should not dominate any development site, or impede, interfere or create conflicts with the functionality of the higher priority primary use.
Sensitive Coastal Habitats	Areas that have: “sensitive resource values,” meaning those fragile or unique natural resources, including flora and fauna, which are particularly susceptible to degradation resulting from surrounding development, the adverse effects of which have not been carefully evaluated, mitigated, or avoided. Examples include, but are not limited to, environmentally sensitive areas, as defined in CCA Section 30107.5, areas uniquely suited for scientific or educational purposes, and specific public recreation areas where the quality of the recreational experience is dependent on the character of the surrounding area. (California Coastal Act Section 30525)
Sensitive Habitat	Land, water, and vegetation needed to maintain one or more sensitive species.
Sensitive Receptor	Areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, noise, and other pollutants. A sensitive receptor includes, but is not limited to, hospitals, schools, daycare

Term	Definition
	facilities, elderly housing, and convalescent facilities, but excludes overnight accommodations.
Setback	The minimum distance required to be maintained between two structures or between a structure and a leasehold line/premises or development area boundary.
Shade Structure	A built or natural structure, either permanent or transient, where the intended use is to provide relief from the sun.
Shared Parking	A parking facility that serves, or is utilized by, two or more developments or uses. An example of a shared parking facility is that shared parking spaces between entities could be utilized during different peak-hour times to result in overall reduction in the total number of required parking spaces.
Ship	A large vessel used for military, cargo, or passenger needs.
Ship Chandlery	A retail dealer specializing in supplies and/or equipment for ships.
Shoreline	Where the land and a body of water meet.
Shoreline Protective Devices	Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply." Upland adaptation strategies and "soft" or natural shoreline solutions, such as living shorelines, do not constitute shoreline protective devices. (California Coastal Act, Section 30235)
Short-term public docking	A location, typically a dock or a pier, that is made available to the public, by reservation and/or on a first come, first served basis, for short-term recreational boat berthing; not for the purposes of overnight berthing for recreational boaters and/or berthing of commercial vessels. A "Dock and Dine" facilities is the same as short-term public docking.
Sidewalk	A dedicated non-waterside pathway, providing pedestrian connectivity adjacent and parallel to a roadway.
Site	To locate or position (verb). The place where a structure or development was, is, or will be located (noun).
Special Allowances	Provide specific detail on allowable uses, conditions, or operations in specific locations on Tidelands. Special allowances are intended to address unique situations in either a planning district or subdistrict.
Spill Response Services	An establishment that provides the necessary services required to effectively respond to, contain, and clean up releases of hazardous chemicals and/or wastes.
Sportfishing	Fishing duly authorized under applicable state and federal laws or regulations in which passengers pay to fish on a licensed sportfishing vessel.
Standards	Establish requirements for the physical development of property.
State Tidelands and Submerged Lands (or tidelands and submerged lands)	Pursuant to the Submerged Lands Act of 1953, these lands include: (1) all lands within the boundaries of each of the respective States which are covered by nontidal waters that were navigable under the laws of the United States at the time such State became a member of the Union, or acquired sovereignty over such lands and waters thereafter, up to the ordinary high water mark as heretofore or hereafter modified by accretion, erosion, and reliction; (2) all lands permanently or periodically covered by

Term	Definition
	tidal waters up to but not above the line of mean high tide and seaward to a line three geographical miles distant from the coast line of each such State and to the boundary line of each such State where in any case such boundary as it existed at the time such State became a member of the Union, or as heretofore approved by Congress, extends seaward (or into the Gulf of Mexico) beyond three geographical miles, and (3) all filled in, made, or reclaimed lands which formerly were lands beneath navigable waters. These lands are managed by the California State Lands Commission or its grantees.
Stepback	An upper-story setback, a step-like recession in a building wall, used to reduce building bulk and scale, promote daylight, create pedestrian character, and/or reduce shadow.
Stewardship	An ethic that embodies the responsible planning and sustainable management of resources.
Storage	Dedicated structures or areas where materials or goods are kept until needed.
Strategic Highway Network (STRAHNET)	The STRAHNET is a 62,791-mile system of roads deemed necessary for emergency mobilization and the peacetime movement of heavy armor, fuel, ammunition, repair parts, food, and other commodities to support U.S. military operations. Even though the U.S. Department of Defense deploys heavy equipment primarily by rail, highways still play a critical role in times of need. STRAHNET Connectors (about 1,700 miles) are additional highway routes linking more than 200 important military installations and ports to STRAHNET. These routes typically are used when personnel and equipment are moved during a mobilization or deployment. Generally, these routes end at the port boundary or installation gate. Although installations may have multiple access/ egress routes, the STRAHNET Connector is generally the most direct and highest functional class roadway.
Structure	Includes, but is not limited to, any building, road, pipe, electrical power transmission and distribution line, communication facilities, renewable energy facilities, in-water improvements, or permanent placement or erection of any solid material on land or in the water, including without limitation building materials or landscaping.
Subdistrict	A division of a planning district.
Support	To carry or bear the weight of; To promote the interests or cause of.
Sustainable	Practices that meet the needs of present users without compromising the ability of future generations to meet their own needs, particularly with regard to use and waste of natural resources.
Technology Cluster	Broad and inclusive networks made up of public and private entities focused on industrial research, training, and technology transfer.
Terminal	A connection point for Industrial marine or cruise terminal operations.
Tidelands	The District's territory or jurisdiction as defined by the San Diego Unified Port District Act, Section 5: <ul style="list-style-type: none"> The area within the district shall include all of the corporate area of each of the cities of San Diego, Chula Vista, Coronado, National City, and Imperial Beach which establish the district as provided in this act, and any unincorporated territory in the County of San Diego contiguous thereto, which is economically linked to the development and operation of San Diego Bay, included in the district by the board of supervisors of

Term	Definition
	<p>the county as provided in this act. The regulatory, taxing, and police power jurisdiction of the district, as otherwise provided for in this act, shall apply to the above-described area.</p> <ul style="list-style-type: none"> • In addition to the powers and authority describe in subdivision (a), the district shall exercise its land management authority and powers over the following areas: • The tidelands and submerged lands granted to the district pursuant to this act of any other act of the Legislature. • Any other lands conveyed to the district by any city of the County of San Diego or acquired by the district in furtherance of the district’s powers and purposes as provided in Section 87 [of the San Diego Unified Port District Act]. Additionally, after acquired tidelands and exchanged lands are considered District Tidelands.
Tidelands Border Community	Communities in the City of Imperial Beach, which tend to have poor water quality and suffer from transboundary environmental pollution in and around the Tijuana River Valley.
Tower	That portion of a building located above the base building, extending to the top of the building.
Tower Floor Plate	The amount of gross floor area located on a single floor in the tower of a building.
Toxic Air Contaminants	An air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. (39655 California Health and Safety Code)
Transient Vessel Docking	Short-term boat docking which allows vessels access for dock and dine and passenger pick-up and loading.
Transit Facilities	Structures or location advancing public transit operations on and off the roadway system.
Transition Zone	A sequence of graduated land uses.
Transportation Network Companies	A mobility service provider offering prearranged transportation services for compensation to connect drivers using their personal vehicles with passengers.
Trust-consistent	Activities or uses that are compatible with the District’s mandate and responsibilities to administer the Tidelands in trust. Includes administration activities undertaken by the District and associated facilities (offices) principally to conduct such administration as well as the beneficial uses of tidelands (commerce, environmental stewardship, fisheries, navigation, recreation,) and support thereof.
Underutilized Land	An undeveloped or underdeveloped parcel or development site not optimized for social, environmental, and economic potential.
Update	To bring into conformance or to improve with the current facts, methods, or ideas
Upland Connecting Roadway	A landside accessway connecting Tidelands to and from adjacent jurisdictions.
Upwelling	An oceanographic phenomenon that involves wind-driven motion of dense, cooler, and usually nutrient-rich water towards the ocean surface, replacing the warmer, usually nutrient-depleted surface water.
Use	Development or activity that occurs on a site or in a building or facility.
Use Type	Any purpose for which a lot, building, or other structure or tract of land may be designated, arranged, intended, maintained, or occupied; or any

Term	Definition
	activity, occupation, business, or operation carried on or intended to be carried on in a building or structure or on a tract of land.
Vessels	All types of ocean-going watercraft (personal and recreational), ships (military, cargo, and cruise), commercially operated passenger boats, and commercial fishing and sportfishing boats.
Viability	Ability to work as intended or to succeed.
View Corridor Extension	A scenic extension from a street, or other accessway, or a defined viewpoint, as depicted on the Planning District Coastal Access: Views and Pathways figures.
Visitor Overnight Accommodations (associated cost levels)	<p>Lower Cost. For hotels or motels, the average daily room rate of all economy hotels and motels in the San Diego County Coastal Zone that have room rates that are 25 percent below the Statewide average daily room rate or lower. Economy hotels and motels are AAA-rated one or two diamond hotels, or equivalent. Lower cost overnight accommodations shall also include campgrounds, hostels, and recreational vehicle parks, as these overnight accommodations are inherently lower cost.</p> <p>Moderate Cost. The average daily hotel or motel room rate in the San Diego County Coastal Zone that is between lower cost and higher cost.</p> <p>Higher Cost. The average daily hotel or motel room rate in the San Diego County Coastal Zone is 25 percent higher than the Statewide average daily room rate or greater.</p> <p>Refer to Goal 6 (Chapter 3.1, Water and Land Use Element) for more information.</p>
Visual Access	The unhindered, ability to have continuous views of scenic resources.
Visual Porosity	Visual porosity describes the amount of unobstructed visual access or continuous views a user has through a particular space to the waterfront. Visual obstructions that decrease visual porosity include any structures, utilities or infrastructure, furnishings, vegetation or other permanent or temporary features.
Walkways	A non-waterside pathway, not parallel to a roadway, that provides access from the nearest public road to the waterfront, also known as vertical access. Walkways are primarily for pedestrians (non-exclusive use) and may also function as a multi-use pathway and/or include a designated multi-use pathway and may include a view corridor extension.
Water Feature	A point of interest with water as the defining focus.
Water Use Type	A type of development or activity occurring in or on the water within a specified water use designation.
Water-Based Transfer Point	A place for loading and offloading passengers and/or cargo. This may include piers, docks, and slips.
Water-Based Transit	Transportation services available to the public (operated publicly or privately) picking up and offloading passengers at water-based transfer points.
Watercraft	Vessels used for personal and recreational use.
Waterfront Destination Park	A large, highly programmed recreation open space located at the water's edge. May include a single large flexible space that can be programmed for diverse temporary uses, events, or activities or a series of smaller spaces that can be combined into a single contiguous area for temporary uses, events, or activities.

Term	Definition
Water-Oriented Retail	Shopping facilities principally devoted to the sale of commercial goods utilized for water-oriented purposes.
Waterways	A navigable body of water.
Wave run-up	The maximum vertical extent of wave action on a beach or structure, above the still water line.
Wayfinding	Signage, graphic representations, or other digital or technological tools that provide orientation to one's surroundings and help one navigate from place to place.
Wetlands	Lands which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.
Window to the Bay	A designated stretch of waterfront, located generally between Ash Street and Date Street within the North Embarcadero Subdistrict, providing a continuous visual access of the Bay.
Yacht Club	A sport club specifically related to yachting.

Introduction

This chapter provides a summary of the Draft Program Environmental Impact Report (PEIR) prepared for the Port Master Plan Update (PMPU), prepared in compliance with the California Environmental Quality Act (CEQA). The San Diego Unified Port District (District) is the CEQA Lead Agency for the PEIR and, as such, has the primary responsibility for evaluating the environmental effects of the proposed PMPU and considering whether to approve or disapprove the proposed PMPU, in light of these effects.

As required by CEQA, this Draft EIR does the following: (1) describes the proposed PMPU, including its location, objectives, benefits, and features; (2) describes the existing conditions in the project area and nearby environs; (3) analyzes the direct, indirect, and cumulative adverse physical effects that would occur on the existing conditions should the proposed PMPU be implemented; (4) identifies feasible means of avoiding or substantially lessening the significant adverse effects; (5) provides a determination of significance for each impact, after mitigation is incorporated; and (6) evaluates a reasonable range of feasible alternatives to the proposed PMPU that would meet the basic project objectives and reduce a project-related significant impact.

This Executive Summary covers the following topics: (1) Project Description; (2) Areas of Controversy/Issues Raised by Agencies and the Public; (3) Significant Environmental Effects, with proposed mitigation measures and alternatives to reduce or avoid such effects; and (4) Issues to Be Resolved, including whether or how to mitigate significant environmental effects and the choice among alternatives to the proposed PMPU.

Project Description

Overview

The District is undertaking a comprehensive update to its existing Port Master Plan (PMP). The PMPU provides the official goals and planning policies, as well as water and land and uses, for development and conservation of the District lands, tidelands, and submerged lands (collectively, Tidelands or District Tidelands) that comprise the proposed PMPU area. With buildout expected to occur by 2050, the proposed PMPU will implement the approximately 30-year planning vision by identifying allowable water and land uses and providing policies that address the following six PMPU Elements

- Ecology
- Economics
- Environmental Justice
- Safety and Resiliency
- Mobility
- Water and Land Use

Project Location

The District's jurisdiction is divided into ten planning districts (individually, PD, and collectively, PDs) that group Tideland properties into identifiable and functional units. Planning district boundaries conform closely to the boundaries of established municipal jurisdictions following logically grouped geographic areas and provide the detailed Planned Improvements, Development Standards, Special Allowances, and water and land use maps. The ten planning districts are as follows:

- PD1: Shelter Island
- PD2: Harbor Island
- PD3: Embarcadero
- PD4: Working Waterfront
- PD5: National City Bayfront (excluded from PMPU)
- PD6: Chula Vista Bayfront (excluded from PMPU)
- PD7: South Bay (Pond 20 is excluded from the proposed PMPU)
- PD8: Imperial Beach Oceanfront
- PD9: Silver Strand
- PD10: Coronado Bayfront

As discussed in Chapter 3, Project Description, the PMPU addresses eight of the District's ten planning districts, including PD1, PD2, PD3, PD4, PD8, PD9, PD10 and part of PD7. The PMPU excludes, and this PEIR does not analyze, PD5, PD6 and the Pond 20 portion of PD7 because the PMPU does not propose any changes in the existing conditions in those planning districts.

Project Objectives

State CEQA Guidelines Section 15124(b) requires an EIR to contain a statement of objectives that address the underlying purpose of the project, which may also show a project's benefits. The District has identified the following objectives for the proposed PMPU:

1. Create an integrated vision for the District that governs the use, design, and improvement of public trust lands in accordance with Section 30711 of the California Coastal Act (CCA), the Public Trust Doctrine, and the San Diego Unified Port District Act (Port Act).
2. Within the PMPU area, create standards for new development, which serve to: 1) enhance and blend development with the surrounding character; 2) provide a balanced and diverse range of complementary uses; and 3) provide enough activation year-round and during the day-time for visitors to minimize the seasonally-related downtimes of uses on Tidelands.
3. Streamline the project review and entitlement process for implementation of the Port Master Plan.
4. Allow for an intensity and diversity of development that provides on-going and sustainable revenues to the District to ensure the longevity of the District's operations and its ability to fulfill its legislative responsibilities; balance the future needs of the maritime industry, tourism, water

and land recreation; and reinvestment in critical infrastructure and maintenance of waterfront amenities and facilities as required by the Port Act and Public Trust Doctrine.

5. Provide an interconnected mobility network that encourages a range of travel modes, including the expansion of water- and land-based transit opportunities to support the movement of people, goods, and military operations.
6. Enliven the public realm by providing and maintaining recreation open space opportunities, through the creation and maintenance of: 1) public accessways; 2) physical and visual access to the water; and 3) an interconnected open space network.
7. Provide opportunities for creating a vibrant waterfront destination with a range of attractions for visitors, while protecting and restoring the environment through the proactive management of sensitive biological resources and ensuring coastal access around San Diego Bay.

These project objectives support several benefits of the PMPU, which are discussed under Section 3.4, *Project Benefits*.

Areas of Known Controversy/Issues Raised by Agencies and the Public

Section 15123 of the State CEQA Guidelines requires the summary of an EIR to identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public. On March 30, 2017, the District posted a Notice of Preparation (Clerk Document No. 66681) (NOP) with the County Clerk in accordance with Section 15082 of the State CEQA Guidelines. This NOP was mailed to public agencies, organizations, and other interested individuals to solicit their comments on the scope and content of the environmental analysis. The District also held a public scoping meeting on April 12, 2017, at the District's Administration Building at 3165 Pacific Highway, San Diego, CA, 92101. The NOP is included as Appendix A.

A total of 23 comment letters were received during the NOP public review period. The primary issues raised were related to aesthetics; air quality; biological resources; greenhouse gases (GHGs); geologic hazards and soils; hazards and hazardous materials; hydrology and water quality; land use and planning; noise and vibration; population and employment; public services and recreation; utilities; sea level rise and climate change; and transportation, mobility, and public access. A summary of all comments received is included in Table 1-2 of Chapter 1, *Introduction*, and all NOP comment letters are included in Appendix B of this PEIR.

Issues to be Resolved

Summary of Project Impacts

This Draft PEIR examines the potential environmental effects of the proposed PMPU, including information related to existing site conditions, analyses of the types and magnitude of individual and cumulative environmental impacts, and feasible mitigation measures that could reduce or avoid environmental impacts. In accordance with Appendix G of the State CEQA Guidelines, the potential environmental effects of the proposed PMPU were analyzed for the following areas.

- Aesthetics and Visual Resources
- Land Use and Planning

- Air Quality and Health Risk
- Biological Resources
- Cultural Resources
- Geologic Hazards and Soils
- Greenhouse Gas Emissions and Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise and Vibration
- Population and Employment
- Public Services and Recreation
- Sea Level Rise and Climate Change
- Transportation, Mobility, and Public Access
- Utilities and Service Systems

Table ES-1, presented at the end of this chapter, provides a summary of the significant environmental impacts that could result from implementation of the proposed PMPU and feasible mitigation measures that would reduce or avoid the impacts. For each impact, Table ES-1 identifies the significance of the impact before mitigation, applicable mitigation measures, and the level of significance of the impact after the implementation of the mitigation measures.

There are no agricultural, forestry, mineral, or tribal cultural resources identified within the proposed PMPU area; therefore, the proposed PMPU would not have an adverse effect on any of these resources. In addition, there are no wildfire hazard designated areas within or adjacent to the proposed PMPU area; therefore, the proposed PMPU would not result in impacts related to wildfire. Chapter 5, *Additional Consequences of PMPU Implementation*, includes a brief analysis as to why impacts on agricultural, forestry, mineral, and tribal cultural resources, as well as impacts related to wildfire would not be significant.

Summary of Project Alternatives

The following alternatives are analyzed in detail in Chapter 6, *Alternatives to the PMPU*. The objective of the alternatives analysis is to consider a reasonable range of potentially feasible alternatives that would achieve the fundamental objectives of the PMPU and would avoid or substantially lessen any of the PMPU's potential significant impacts. The alternatives to the proposed PMPU are summarized below.

Alternative 1 – No Project Alternative

The No Project Alternative is required by CEQA and results in the continued implementation of the existing PMP. Pursuant to State CEQA Guidelines Section 15126.6(e), the No Project Alternative considers the existing conditions and what would be reasonably expected to occur in the foreseeable future, if the proposed PMPU was not approved, based on current plans and consistent with available infrastructure and community services. The appealable projects identified in the project lists tables under each existing precise plan in the existing PMP are assumed to be developed under this alternative. Development projections under this alternative are identified in Table 6-2 and would include up to 22,500 square feet of additional retail and restaurant space, 1,000 hotels rooms, 50 additional recreational boat slips, and 960,000 square feet of additional convention center space. In addition, the Tenth Avenue Marine Terminal (TAMT) would continue to implement the improvements consistent with the Tenth Avenue Marine Terminal Redevelopment Plan¹ (.

¹ See Chapter 3, *Project Description*, for a more detailed discussion on the Tenth Avenue Marine Terminal Redevelopment Plan.

Alternative 2 – One-Third Reduced Growth Alternative

The One-Third Reduced Growth Alternative involves similar plan components as the proposed PMPU, but at an overall reduced scale. A reduction in the scale and magnitude of the proposed water and land uses is intended to reduce impacts to air quality and health risk, biological resources, greenhouse gas emissions, hydrology and water quality, noise, public services, transportation, and utilities. The One-Third Reduced Growth Alternative proposes a reduction in intensity of development by one-third for the following uses throughout the proposed PMPU area:

- **Retail and Restaurants:** This alternative would reduce the proposed PMPU's increased retail/restaurant uses from approximately 340,000 square feet to 227,800 square feet. Convention space would also be reduced from approximately 180,000 additional square feet to approximately 120,000 additional square feet. These reductions would be largely within PD2 (Harbor Island Planning District) and PD3 (Embarcadero Planning District).
- **Hotel Rooms:** The One-Third Reduced Growth Alternative would reduce the proposed increase of approximately 3,910 hotel rooms to approximately 2,620 rooms. These reductions would be largely within PD2, with a reduction of approximately 248 rooms in PD3.
- **Recreational Boat Slips:** The One-Third Reduced Growth Alternative would reduce the proposed increase of approximately 485 recreational boat slips to approximately 325 recreational boat slips. These would be largely spread among PDs 1-3, and PDs 9-10, with the majority of reductions found within PD2.

While reducing the scale of development, this alternative would inversely increase recreation and open space throughout the proposed PMPU area to account for the reduced development intensity. The reductions in scale and intensity would also reduce the scale of the mobility hubs currently proposed in the PMPU.

Alternative 3 – One-Half Reduced Growth Alternative

The One-Half Reduced Growth Alternative involves similar plan components as the proposed PMPU, but at an overall reduced scale. A reduction in the scale and magnitude of the proposed land and water uses is intended to reduce impacts to air quality and health risk, biological resources, greenhouse gas emissions, hydrology and water quality, noise, public services, transportation, and utilities. The One-Half Reduced Growth proposes a reduction in intensity of development by one-half for the following uses throughout the proposed PMPU area:

- **Retail and Restaurants:** This alternative would reduce the proposed PMPU's increased retail/restaurant uses from approximately 340,000 square feet to 170,000 square feet. Convention space would also be reduced from approximately 180,000 additional square feet to approximately 90,000 additional square feet. These reductions would be largely within PD2 with approximately 41,000 square feet in PD3.
- **Hotel Rooms:** The One-Half Reduced Growth Alternative would reduce the proposed increase of approximately 3,910 hotel rooms to approximately 1,955 rooms. These reductions would be largely within PD2, with a reduction of approximately 425 rooms in PD3.
- **Recreational Boat Slips:** The One-Third Reduced Growth Alternative would reduce the proposed increase of approximately 485 recreational boat slips to approximately 325 recreational boat slips. These would be largely spread among PDs 1-3, and PDs 9-10, with the majority of reductions found within PD2.

While reducing the scale of development, this alternative would inversely increase recreation and open space throughout, the PMPU area, to account for the reduced development intensity. The reductions in scale and intensity would also reduce the scale of the mobility hubs currently proposed in the proposed PMPU.

Alternative 4 – Harbor Island Centralized Commercial Recreation Alternative

The Harbor Island Centralized Commercial Recreation Alternative was developed in response to stakeholder input. This alternative is located in the Harbor Island Planning District (PD2) and would include an increase in Recreation Open Space designated land use areas in the Spanish Landing Subdistrict and an increase in Commercial Recreation designated land use areas in the East Harbor Island Subdistrict (see Figure 6-1). Within the Spanish Landing Subdistrict, approximately 2.99 acres of land area proposed as Commercial Recreation in the PMPU would instead be assigned the Recreation Open Space land use designation. Within the East Harbor Island Subdistrict, approximately 2.65 acres of land designated Recreational Open Space would instead be assigned the Commercial Recreation land use designation.

This reallocation of land use designations would allow for the more centralized and contiguous placement of visitor-serving commercial development within the overall planning district, specifically in the East Harbor Island Subdistrict, which would potentially result in lowering total VMT due to proximity to existing and planned visitor-serving commercial development in the surrounding area. Additionally, the reallocation would allow for the preservation of existing park space in the Spanish Landing Subdistrict, which could accommodate the placement of activating features consistent with the Baywide Development Standards and allowances within Recreation Open Space designated spaces as permitted in other subdistricts. This alternative would result in an overall net increase of 0.34 acre of Recreation Open Space areas within the East Harbor Island Planning District and would establish continuous shoreline access for the public while providing additional areas for visitors to recreate and experience the waterfront.

All other proposed water and land use designations and potential development intensities would remain the same as the proposed PMPU under this alternative.

Alternative 5 – Recreation Open Space Alternative

The Recreation Open Space Alternative was developed in response to stakeholder input. This alternative is located in PD3 and would include the closure of North Harbor Drive between Ash Street and Grape Street (i.e., directly adjacent and to the west of the County Administration Center) to vehicular traffic; however, shuttle and emergency access, along with commercial loading access for visitor-serving uses situated along this portion of the Embarcadero, would still be allowed. Vehicular traffic that currently utilizes this segment of North Harbor Drive would be rerouted to Pacific Highway. The closed segment of North Harbor Drive would be converted from Institutional/Roadway to Recreation Open Space and would slightly increase the total acreage of Recreation Open Space in the planning district. The closure of this segment of North Harbor Drive would allow for the establishment of a “festival street”, providing contiguous park space from the County waterfront park on the east to the embarcadero on the west. Types of activities that could occur under this alternative would be consistent with other Recreation Open Space areas within the Tidelands, including, but not limited to, 5K runs/walks, parades, film, food, and music festivals. All other proposed water and land use designations and potential development intensities would remain the same as the proposed PMPU under this alternative.

Environmentally Superior Alternative

Pursuant to CEQA, an EIR is required to identify the environmentally superior alternative. As shown in Table 6-3, the One-Third Reduced Growth Alternative (Alternative 2) and the One-Half Reduced Growth Alternative (Alternative 3) reduce the same number of significant impacts. However, because Alternative 3 would result in less overall development than Alternative 2, this alternative is the environmentally superior alternative. As provided in the analysis above, there are different tradeoffs for each alternative, depending upon the specific resource areas. Individuals and the decision-makers may weigh these resource areas differently.

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Table ES-1. Project Impacts and Mitigation Measures

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.1 Aesthetics and Visual Resources			
Project Impacts			
<p>Impact-AES-1: Potential to Interfere with Designated Scenic Vista Areas or View Corridors During Construction Associated with Implementation of the Proposed PMPU. Construction activities associated with future development occurring under the proposed PMPU could involve the use of construction equipment, such as large cranes, construction barges, or other tall and/or bulky equipment, that could intrude into a designated scenic vista area or view corridor extension, which would temporarily interfere with the views provided by scenic vista areas or view corridor extensions, or prevent access to the scenic vista areas or view corridor extensions, which could have a substantial adverse effect on a designated scenic vista. Impacts are considered significant.</p>	PS	<p>MM-AES-1: Plan Construction Schedule and Storage/Staging to Avoid Scenic Vista Areas and View Corridor Extensions. Prior to District approval of a future development project, the project proponent shall provide the District with the project’s construction schedule, including the phasing of the construction, the type of construction equipment to be used, and the duration and location of the use of the construction equipment. The District shall review the construction schedule, and may require the proponent to alter the schedule to prevent extended interference with views from designated scenic vista areas or view corridor extensions. The project proponent shall locate construction equipment away from designated scenic vista areas or view corridor extensions when not in use or during staging to minimize potential impacts on views. The District shall review and approve the construction schedule and staging locations prior to project approval.</p>	SU
<p>Impact-AES-2: Potential to Result in Substantial Degradation of Visual Character and Quality During Construction Associated with Implementation of the Proposed PMPU. Construction activities associated with future development occurring under the proposed PMPU could involve the use of construction equipment, such as large cranes, construction barges, or other tall and/or bulky equipment for extended periods of time, which could result in temporary substantial degradation of the visual character or quality of a site. Impacts are considered significant.</p>	PS	<p>MM-AES-2: Install Construction Fencing. The project proponent shall be required to install construction-screening fencing around the entire perimeter of the project site to shield construction activities from sight. Construction screening shall include, at a minimum, installation of 8-foot-tall fencing for the duration of the construction period that is covered with view-blocking materials, such as tarp or mesh in a color that blends in with the existing environment such as a shade of green or blue, depending on the location. The District’s Development Services Department shall confirm such</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-AES-3: New Permanent Source of Glare Generated by Potential High-Rise Development. New high-rise buildings constructed during implementation of the proposed PMPU could be designed using curtainwall façades that would use architectural finishes and materials that would increase the amount of glare produced at future project sites, which would represent a significant new source of substantial glare at the project site compared to existing conditions that would potentially affect daytime views in the area.</p>	PS	<p>fencing is depicted on the project’s demolition and construction plans.</p> <p>MM-AES-3: Incorporate the Use of Reduced Glare Building Materials. The project proponent for any future high-rise towers (over 75 feet or 7 stories) developed under the proposed PMPU shall incorporate non-reflective exterior building materials in their design, and any glass incorporated into the façade of the building shall either be of low reflectivity or accompanied by a non-glare coating. Glass and other material shall have a light reflectivity factor no more than 30% and no more than 50% of the building surface shall be made of reflective materials, to be consistent with the standards established in the City of San Diego Municipal Code §142.0730 Glare Regulations and any future amendments. Prior to issuance of a building permit for future high-rise hotel towers, the District shall confirm such non-reflective materials and low reflectivity or non-glare coating are depicted on the appropriate building plans. Building plans and materials shall be consistent with specific design strategies as described in Section 4.3, <i>Biological Resources</i>, under MM-BIO-9, Implement Bird Strikes Reduction Measures on New Structures, to avoid or reduce potential for bird strikes.</p>	LTS
<p>Impact-C-AES-1: Potential to Result in Cumulatively Considerable Adverse Impacts on Scenic Vista Areas or View Corridors During Construction. Construction activities associated with future development occurring under the proposed PMPU could involve the use of construction equipment, such as large cranes, construction barges, or other tall and/or bulky equipment, that could intrude into a designated scenic vista area or view corridor extension, which could entirely block or interfere with the views provided by scenic vista areas or view corridors, or</p>	PS	<p>Implement MM-AES-1, as described above.</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>prevent access to the scenic vista areas or view corridors. In combination with other construction activity in or adjacent to the proposed PMPU area, this would result in a cumulatively considerable impact on scenic vista areas or view corridors.</p>			
<p>Impact-C-AES-2: Potential to Result in Cumulatively Considerable Substantial Degradation of Visual Character and Quality During Construction. Construction activities associated with future development occurring under the proposed PMPU could involve the use of construction equipment, such as large cranes, construction barges, or other tall and/or bulky equipment for extended periods of time, which could result in temporary substantial degradation of the visual character or quality of a site. In combination with other construction activity in or adjacent to the proposed PMPU area, this would result in a cumulatively considerable impact on visual quality and character.</p>	PS	Implement MM-AES-2 , as described above.	SU
<p>Impact-C-AES-3: Potential to Result in a Cumulatively Considerable New Permanent Source of Glare Generated by Potential High-Rise Development. New high-rise buildings constructed during implementation of the proposed PMPU could be designed using curtainwall façades that would use architectural finishes and materials that would increase the amount of glare produced at future project sites, which would represent a significant new source of substantial glare that could potentially affect daytime views in the area. In combination with other high-rise buildings in or adjacent to the proposed PMPU area, this would result in a cumulatively considerable impact related to glare.</p>	PS	Implement MM-AES-3 , as described above.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.2 Air Quality and Health Risk			
Project Impacts			
<p>Impact-AQ-1: New Land Use Designations Not Accounted for in the RAQS and SIP. The proposed PMPU would redesignate various water and land uses that could increase activity within the Tidelands. As these land use changes were not known at the time the RAQS and SIP were last updated, this would result in a conflict with the applicable State and regional air quality plans because the proposed land uses and the intensities proposed are not included in RAQS and SIP growth projections.</p>	PS	<p>MM-AQ-1: Update the RAQS and SIP with New Growth Projections. Within 6 months of approval of the proposed PMPU, the District shall provide SANDAG with amended growth assumptions and changes to water and land use designations associated with the proposed PMPU. The District shall coordinate with SANDAG and the SDAPCD to ensure the RAQS and SIP are updated as part of the next soonest revision cycle to reflect the updated growth assumptions of the proposed PMPU.</p>	LTS
<p>Impact-AQ-2: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Construction. Project emissions during construction activities, before mitigation, would exceed thresholds for ROG, NO_x, and CO. Specific construction details (such as project design, location, timing, phasing, and overlapping of possible construction projects that would be implemented over the life of the proposed PMPU) are not known at this time, but the emissions analysis demonstrates the potential for construction emissions to exceed thresholds. As a result, the proposed PMPU would have a significant impact on air quality because future development allowed under the proposed PMPU may result in a cumulatively considerable net increase in criteria pollutants for which the proposed PMPU region is in nonattainment under Federal or State regulations.</p>	PS	<p>MM-AQ-2: Implement Best Management Practices During Construction of all Future PMPU-Consistent Projects. A project proponent shall implement, or require implementation by its construction contractor(s), the following measures during construction and project operations, subject to verification by the District.</p> <ul style="list-style-type: none"> • All project proponents shall limit all construction equipment, drayage, and delivery truck idling times by shutting down equipment when not in use and reducing the maximum idling time to less than 3 minutes. The project proponent shall install clear signage regarding the limitation on idling time at the delivery driveway and loading areas, if applicable, and shall submit annual reports of violators to the District. This measure shall be enforced by the hotel, restaurant, and marina supervisors; and project proponents with more than one violation shall be subject to penalties pursuant to California airborne toxics control measure 13 CCR 2485. The project proponent shall submit evidence of the use of diesel emission reduction measures to the District's 	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>Planning and Green Port Department through annual reporting, with the first report due 1 year from the date of project completion and each subsequent report due exactly 1 year after, noting all violations with relevant identifying information of the vehicles and drivers in violation of these measures.</p> <ul style="list-style-type: none"> The project proponent shall verify that all construction equipment is maintained and properly tuned in accordance with manufacturers' specifications. Prior to the commencement of construction and operations activities using diesel-powered vehicles or equipment, the project proponent shall verify that all vehicles and equipment have been checked by a certified mechanic and determined to be running in proper condition prior to admittance into the delivery driveway and loading areas. The project proponent shall submit a report by the certified mechanic of the condition of the construction vehicles and equipment to the District's Planning and Green Port Department during the operation phase prior to commencement of their use. <p>MM-AQ-3: Implement Diesel Emission-Reduction Measures During Construction of All Future PMPU-Consistent Projects. To reduce ROG and CO emissions during construction of future development under the proposed PMPU, the project proponent shall implement or require implementation by its construction contractor(s) the following measures during construction of the project, and shall provide verification to the District prior to the issuance of a building permit. Prior to the commencement of construction activities for any discretionary project—where the definition of discretionary project meets the definition of the State CEQA Guidelines, and such project is allowed by the PMPU water and land use</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>designations, such as new hotel rooms, restaurant/retail square footage, or boat slips—the project proponent for that project shall submit a list of equipment to be used and the equipment’s specifications (model year, engine tier, horsepower) to the District’s Development Services Department to ensure the construction equipment list is consistent with the following requirements. After construction, the project proponent/operator and/or its contractor(s) shall provide written evidence that the construction was consistent with the requirements.</p> <ul style="list-style-type: none"> • For all construction activities, equip all off-road diesel equipment engines over 25 horsepower with EPA Tier 4 or cleaner engines unless Tier 4 construction equipment is not available within 50 miles of the project site. The project proponent shall submit written evidence to the District prior to commencement of construction activities that Tier 4 or cleaner equipment shall be used, or that Tier 4 or cleaner equipment is not available for use during the entire duration of that project’s construction period beyond 2025. • Use renewable diesel fuel in all heavy-duty off-road diesel-fueled equipment. Renewable diesel must meet the most recent ASTM D975 specification for Ultra Low Sulfur Diesel and have a carbon intensity no greater than 50 percent of diesel with the lowest carbon intensity among petroleum diesel fuels sold in California. • Use zero or near-zero emissions equipment in lieu of diesel- or gasoline-powered equipment where such zero or near-zero equipment is commercially available within 50 miles of the project site. 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<ul style="list-style-type: none"> • Use diesel particulate filters (or the equivalent) if permitted under manufacturer’s guidelines for on-road and off-road diesel equipment. <p>MM-AQ-4: Implement Fugitive Dust Control During Construction of All PMPU-Consistent Projects. During construction of any discretionary project—where the definition of discretionary project meets the definition of the State CEQA Guidelines, and such project is allowed by the PMPU water and land use designations, such as new hotel rooms, restaurant/retail square footage, or boat slips—the project proponent shall implement the following dust control measures that go beyond SDAPCD Rule 55. The project proponent shall submit evidence of the use of fugitive dust reduction measures to the District.</p> <ul style="list-style-type: none"> • Water the grading areas, if any, at a minimum of three times daily to minimize fugitive dust. • Stabilize graded areas, if any, immediately after grading, to minimize fugitive dust. • Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry. • Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads. • Remove any visible track-out into traveled public streets within 30 minutes of occurrence. • Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred. • Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads. • Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling. • Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 mph. 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<ul style="list-style-type: none"> • Cover/water onsite stockpiles of excavated material. • Enforce a 15-mph speed limit on unpaved surfaces. • Sweep up any dirt and debris spilled onto paved surfaces immediately to reduce resuspension of particulate matter caused by vehicle movement. Clean approach routes to construction sites daily for construction-related dirt in dry weather. • Hydroseed, landscape, or develop as quickly as possible all disturbed areas and as directed by the District and/or SDAPCD to reduce dust generation. <p>MM-AQ-5: Use Low-VOC Interior and Exterior Coatings During Construction of All PMPU-Consistent Projects. To reduce VOC emissions from painting activities during construction, the project proponents/operator and/or its contractor(s) that uses coatings shall use low-VOC coatings for all surfaces that go beyond the requirements of SDAPCD Rule 67.0. If architectural coatings (painting) of any single component or multiple components would exceed 10,000 square feet per day, then each project component active on that day shall use coatings with a VOC content of 10 grams per liter or less for all surfaces to be painted. If architectural coatings (painting) of any single component or multiple components would be below 10,000 square feet per day, then each component shall use coatings with a VOC content of 75 grams per liter or less. Prior to the commencement of construction activities of any project component, the project proponent shall submit a list of coatings to be used, their respective VOC content, and a summary of surface area to be painted to the District’s Development Services Department. The District shall conduct inspections during construction as needed to verify the use of low-VOC coatings.</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>MM-AQ-6: Use Modern Harbor Craft and Dredgers During Construction Activities. Prior to waterside construction, the project proponent shall ensure that any harbor craft, including but not limited to tugboats, pusher tugs, tow boats, work boats, crew and supply boats, and dredgers for use during the duration of any in-water work shall meet the following criteria:</p> <ul style="list-style-type: none"> • For all construction activities through 2025, ensure all equipment is Tier 3 or better (cleaner). • For all construction activities after 2025, ensure all equipment is alternatively fueled or electrically powered. If alternatively fueled or electrically powered equipment that emits less emission than Tier 4 or better (cleaner) is not available, then the project proponent shall ensure all equipment is Tier 4 or better. • Use renewable diesel fuel in all heavy-duty off-road diesel-fueled equipment. Renewable diesel must meet the most recent ASTM D975 specification for Ultra Low Sulfur Diesel and have a carbon intensity no greater than 50 percent of diesel with the lowest carbon intensity among petroleum diesel fuels sold in California. <p>If clean harbor craft and dredgers are not available within 200 miles of the project site for the duration of all dredging activities, the project proponent shall prioritize use of equipment that is maintained and properly tuned in accordance with manufacturers' specifications. The project proponent shall document and submit evidence to the District's Development Services Department prior to commencement of waterside construction activities that tugboats, survey vessels, and dredgers meeting the above tiering requirements or better standards are not available for use during the duration of all in-water activities. Regardless of the equipment used, the project</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>proponent shall verify that all equipment has been checked by a mechanic experienced with such equipment and determined to be running in proper condition prior to admittance into the construction area. The project proponent shall submit a report prepared by the mechanic experienced with such equipment of the condition of the construction and operations vehicles and equipment to the District’s Development Services Department prior to commencement of their use.</p> <p>MM-AQ-7: Conduct an Annual Technology Review for Construction Activities. To promote new emission control technologies during construction activities, the District will perform a Periodic Technology Review annually. The Periodic Technology Review shall include a review of technological advancements in the form of alternative-fuel or zero emissions construction equipment, vessels, or trucks.</p> <ul style="list-style-type: none"> • If the Periodic Technology Review identifies new technology that will be effective in reducing emissions compared to default construction equipment, vessels, and trucks, and the District determines that use of the technology is feasible, the District shall require the use of such technology as a condition of any subsequent discretionary approval issued by the District. <p>MM-AQ-8: Project-Level Environmental Reviews. If project-level environmental review of future development projects allowed under the PMPU is required, the District shall prepare or cause the preparation of an air quality technical report that analyzes all phases of project construction and operations and determine whether emissions would exceed SDAPCD thresholds. If a project’s air quality technical report determines that construction or operations emissions exceed the SDAPCD threshold(s),</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-AQ-3: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Operations. Project emissions during operations, before mitigation, would exceed thresholds for VOC, NO_x, CO, PM10, and PM2.5. As a result, the proposed PMPU would have a significant impact on air quality because future development allowed under the proposed PMPU may result in a cumulatively considerable net increase in criteria pollutants for which the proposed PMPU region is in nonattainment under Federal or State regulations.</p>	PS	<p>the project proponent shall be required to implement site-specific mitigation measures to avoid or reduce emissions to SDAPCD thresholds. Where mitigation measures are required, the District shall identify these measures in the project-level environmental document and include them in a mitigation monitoring and reporting program (MMRP) for the individual development project.</p> <p>MM-AQ-9: Incorporate Sustainability Measures in All Development through 2030. Project proponents shall incorporate into project design for new project components various efficiency and sustainability measures to reduce emissions from energy, water, and solid waste. The following measures shall apply in all planning districts through 2030.</p> <p><i>Energy</i></p> <ul style="list-style-type: none"> • Incorporate energy efficiency design features that exceed 2019 Title 24 California Building Energy Efficiency Standards by 20 percent, or comply with any updates to Title 24 Building Energy Efficiency Standards. Measures that may be implemented include, but are not limited to: <ul style="list-style-type: none"> ○ Use only fluorescent, light-emitting diode (LED), compact fluorescent lamp (CFL), or the most energy-efficient lighting that meets required lighting standards and is commercially available. This measure also requires replacement of existing lighting on the project site if not already highly energy efficient. ○ Install occupancy sensors for vending machines, if any, in new buildings at the project site. ○ Implement onsite renewable energy to new buildings, unless the District determines the system 	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>cannot be built in light of structural and operational constraints.</p> <ul style="list-style-type: none"> ○ Install co-generation systems (i.e., combined heat and power systems) in new buildings, if deemed feasible by the District. ○ Use high-performance glazing with a low solar heat gain coefficient value that reduces the amount of solar heat allowed into the building. ○ Install increased insulation with an R value of 49 or better. ○ Install cool roofs with an R value of 30 or better. ○ Use sun shading devices in parking lots and asphalted common areas. ○ Install high-efficiency heating, ventilating, and air condition systems and controls. ○ Install programmable thermostats. ○ Install Energy Star rated appliances. <p><i>Water</i></p> <ul style="list-style-type: none"> ● Reduce indoor water consumption by 20 percent lower than baseline buildings (defined by Leadership in Energy and Environmental Design [LEED] as indoor water use after meeting Energy Policy Act of 1992 fixture performance requirements) through use of low-flow fixtures in all bathrooms. ● Install low-water plantings and drip irrigation, and minimize domestic water demand the system for landscaping purposes. Use recycled or grey water for landscaping, if available. <p><i>Waste</i></p> <ul style="list-style-type: none"> ● Comply with AB 341 and the relevant jurisdiction’s recycling ordinances, and include recycling at least 50 percent of solid waste. Compliance with relevant jurisdiction’s construction and demolition waste 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>requirements shall be mandatory and shall include recycling at least 65 percent of all construction and demolition debris. This measure shall be applied during construction and operation of a project.</p> <ul style="list-style-type: none"> • Ensure that all commercial, restaurant, and retail uses implement recycling, composting of food waste and other organics, and the use of reusable products instead of disposal of products thus diverting solid waste from the landfill stream. <p><i>Mobile Sources</i></p> <ul style="list-style-type: none"> • Ensure that each project component implements a Transportation Demand Management plan that incentivizes, to the extent allowed by law, voluntary implementation of employer commuting measures, such as carpooling, transit subsidies, and vanpools to reduce worker trips and parking demand, as described in MM-TRA-3. • Ensure that bicycle parking is included in new building construction or renovation of buildings. The number of spaces will be at a minimum 5 percent of new automobile parking spaces <p><i>Carbon Sequestration and Land Use</i></p> <ul style="list-style-type: none"> • Install trees and shrub planters throughout the project area as part of the landscape plan. <p>MM-AQ-10: Require All New Hotels to Reduce Natural Gas Prior to 2030 and All New Development to be Carbon Neutral After 2030. For all new hotel projects prior to 2030, the District shall require all new hotel projects to forbid the use of natural gas usage except for cooking and kitchen uses, or achieve equivalent reductions through other energy or emission reduction strategy. For all new development after 2030, the District shall require all development to meet the State’s Zero Net Energy (ZNE) standards, if adopted. If</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-AQ-4: Health Effects During PMPU Buildout Construction from ROG and NO_x Emissions. Project-related emissions during construction could contribute a significant level of air pollution from ROG and NO_x within the SDAB. Specific construction details (such as timing, phasing, and overlapping of possible construction projects implemented over the life of the proposed PMPU) are not</p>	PS	<p>by 2030, no ZNE standard has been adopted by the State, the District shall require all project proponents to construct ZNE buildings or submit written documentation as to why ZNE standards cannot be complied with. Moreover, the District shall encourage project developers to construct all-electric buildings. The project proponent shall document and submit evidence to the District’s Development Services Department prior to commencement of construction activities.</p> <p>MM-AQ-11: Install EV Charging Infrastructure. The project proponents shall provide electric vehicle (EV) ready parking spaces, at a rate of a minimum of six percent of the total required new parking spaces, as part of any new building construction or renovation of buildings. The District shall install, or cause the installation of, EV charging infrastructure on Tidelands. These installations shall at minimum include, but not be limited to: 1) 400 Level 2 chargers and 22 DC Fast chargers, by 2030; and 2) Installation of 500 Level 2 chargers and 30 DC Fast chargers, by 2050. This is based on recommendations in the CSE EV Infrastructure Scoping Study.</p> <p>MM-AQ-12: Advance Recreational Boat Electrification. The project proponent of any future site-specific development that proposes to add recreational boat slips shall install a 240-volt electrical outlet at each new slip.</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
known at this time and emissions could exceed relevant thresholds that that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.			
Impact-AQ-5: Health Effects During PMPU Buildout Operations from ROG, NO_x, and CO. Project-related emissions during operations could contribute a significant level of air pollution from ROG, NO _x , and CO within the SDAB. Implementation of the proposed PMPU could exceed relevant thresholds that that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.	PS	Implement MM-AQ-9 through MM-AQ-12 , as described above.	SU
Impact-C-AQ-1. New Land Use Designations Not Accounted for in the RAQS and SIP. The proposed PMPU would redesignate various water and land uses that could increase activity within the Tidelands. These uses were not known at the time the RAQS and SIP were last updated, thus resulting in a conflict because the proposed land uses and the intensities proposed are not included in RAQS and SIP growth projections.	PS	Implement MM-AQ-1 , as described above.	LTS
Impact-C-AQ-2 Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Construction. The proposed PMPU emissions during construction activities, before mitigation, would result in a cumulatively considerable contribution to a significant cumulative impact with respect to a net increase in criteria pollutants for which the region is nonattainment under an applicable Federal or State ambient air quality standard.	PS	Implement MM-AQ-2 through MM-AQ-8 , as described above.	LTS
Impact-C-AQ-3 Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Operations. The proposed PMPU emissions during operations, before mitigation, would result in a cumulatively considerable contribution to a significant cumulative impact with respect to a net increase in criteria	PS	Implement MM-AQ-9 through MM-AQ-12 , as described above.	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
pollutants for which the region is nonattainment under an applicable Federal or State ambient air quality standard.			
Impact-C-AQ-4 Health Effects During PMPU Buildout Construction from ROG and NO_x Emissions. The proposed PMPU emissions during construction activities, before mitigation, could contribute a cumulatively significant level of air pollution by exceeding relevant thresholds that that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.	PS	Implement MM-AQ-2 through MM-AQ-8 , as described above.	LTS
Impact-C-AQ-5 Health Effects During PMPU Buildout Operations from ROG, NO_x, and CO. The proposed PMPU emissions during operational activities, before mitigation, could contribute a cumulatively significant level of air pollution by exceeding relevant thresholds that that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.	PS	Implement MM-AQ-9 through MM-AQ-12 , as described above.	SU
4.3 Biological Resources			
Project Impacts			
Impact-BIO-1: In-Water Construction-Induced Noise Impacts Disrupting Foraging Behavior of Sensitive Avian Species Such as California Least Tern and California Brown Pelican. In-water construction-induced noise impacts from overwater construction activities such as pile driving could disrupt the foraging behavior of the California least tern if construction occurs during the California least tern nesting season, as well as other sensitive fish-foraging avian species such as California brown pelican. This impact would be significant.	PS	MM-BIO-1: Implement Construction Measures to Avoid or Reduce Noise Impacts on California Least Tern and Other Sensitive Fish Foraging Avian Species. For future development projects that the District determines have the potential to disturb foraging behavior of California least tern and other sensitive fish foraging avian species due to in-water construction activities (e.g., pile driving), the project proponent shall retain a qualified biologist, approved by the District, to monitor onsite construction activities. The project proponent shall take specific actions, as approved by the District, to reduce or temporarily stop noise-producing activities if the qualified biologist identifies that the activities are impacting the foraging behavior of sensitive avian species from April 1, or	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-BIO-2: Construction Noise Impacts on Nesting Behavior of Marine-Dependent Species Protected Under the Migratory Bird Treaty Act and California Fish and Game Code. Construction-induced noise impacts from landside and overwater construction activities can disturb nesting marine dependent bird species protected under the MBTA and California Fish and Game Code. Disturbance can lead to nest abandonment or altered behavior that results in lowered nesting success. This impact would be potentially significant.</p>	PS	<p>when the California least terns first appear in the Bay, until the California least terns have left the bay or September 15th. These actions shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • For all pile driving activities performed during the California least tern nesting season, a qualified biologist shall be on site observing for foraging California least terns. If any California least terns are observed, the qualified biologist shall have the authority to halt or modify pile driving activity to ensure foraging behavior is not altered by construction. Work modifications that may limit pile driving noise impacts may include: <ul style="list-style-type: none"> ○ Reducing the intensity of pile driving. ○ Placing sound dampening panels on pile driving equipment. ○ Restricting pile driving to periods when sensitive avian species are not present. • For all pile driving projects that may impact any other sensitive nesting avian species refer to MM-BIO-2. <p>MM-BIO-2: Implement Construction Noise Measures to Avoid or Reduce Noise Impacts on Sensitive Nesting Marine-Dependent Avian Species. For future development projects that the District determines have the potential to disturb sensitive nesting marine dependent avian species, the project proponent shall ensure that nesting bird behavior is not modified during construction activities that generate noises above ambient conditions. The project proponent shall implement the following measures during construction:</p> <ul style="list-style-type: none"> • The project proponent shall retain a qualified biologist, approved by the District, to perform a nesting bird survey within 500 feet of the noise-generating activity 1 week prior to the start of construction utilizing heavy equipment, and, if nests 	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>are found, the qualified biologist shall perform a survey once per week during construction until use of noise-generating heavy equipment ceases.</p> <ul style="list-style-type: none"> • The project proponent shall submit the survey to the District for review and approval of the survey and the buffer area, defined below, if any, prior to the commencement of these activities at the project site. • The nesting bird survey area shall include the entire limits of disturbance plus a 300-foot buffer for non-raptors and a 500-foot buffer for raptors to ensure indirect impacts would be avoided. The nesting surveys shall consist of a thorough inspection of the project area by a qualified biologist(s). The survey shall occur between sunrise and 12:00 p.m., when birds are most active. If no active nests are detected during these surveys, the qualified biologist(s) shall prepare and submit to the District a letter report documenting the results of the survey. If there is a delay of more than 7 days between when the nesting bird survey is performed and construction activities begin, the qualified biologist shall resurvey to confirm that no new nests have been established. • If the survey confirms nesting within 300 feet of the disturbance footprint for non-raptors or within 500 feet for raptors, the project proponent shall establish a no-disturbance buffer around each nest site to avoid disturbance or destruction of the nest until after the nesting season or a qualified biologist determines that the nest is no longer active. The size and constraints of the no-disturbance buffer shall be determined by the qualified biologist, at the time of discovery, but shall not be greater than 300 feet for non-raptors and 500 feet for raptors. In addition, if the qualified biologist(s) prepares any subsequent reports, the reports shall be submitted to the District. 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<ul style="list-style-type: none"> • The qualified biologist shall establish a baseline ambient sound level by measuring ambient sound levels during the time of day that work is expected to occur. The monitoring distance from the nest shall be chosen to not disturb the species. • If noise-generating activities are within 300 feet for non-raptors and 500 feet for raptors and the species behavior is modified due to noise, the qualified biologist shall monitor noise levels daily, during construction activities, at a distance that would prevent the disturbance of the relevant species. Sound levels at nest sites shall not exceed 10 dBA above ambient levels. This monitoring shall occur until the nest is no longer active. • If sensitive avian species begin nesting within 300 feet for non-raptors and 500 feet for raptors of noise-generating construction and the species behavior is modified, the qualified biologist shall establish a baseline ambient sound level by measuring sound levels at a distance without disturbing the species during a representative construction day. The qualified biologist shall monitor those nests daily during construction activities, until after the nesting season or a qualified biologist determines that the nest is no longer active. If the monitoring shows sound levels more than 10 dBA above the baseline ambient levels (representative construction noise included), and the species behavior is modified, the qualified biologist shall have the authority to halt or modify construction activity to ensure the behavior of sensitive nesting avian species is not altered by construction noise. • If the above noted sound thresholds are exceeded, the project proponent shall implement actions recommended by the qualified biologist and approved by the District to reduce sound levels to 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-BIO-3: In-Water Pile Driving Activity Could Generate Noise Levels that Could Injure (Level A Harassment) or Alter the Behavior of (Level B Harassment) Marine Mammals, Green Sea Turtles, and Fishes. In-water pile driving activities could generate enough underwater noise to physically injure marine mammals, green sea turtles, and fishes should impact hammer or vibratory pile driving occur during construction. Any noise-related impacts would be dependent on the type of activity being performed, the proximity to marine waters, and the biology of the considered species. In-water impact hammer or vibratory pile driving activity by comparison could potentially generate enough underwater noise to injure (Level A Harassment) or alter behavior (Level B Harassment) for marine mammals, green sea turtles, and fishes. This impact would be significant.</p>	PS	<p>within thresholds. Example actions to reduce noise include installation of noise barriers with a minimum STC rating of 28, place noise attenuation dampers on equipment, replace or retrofit noisy equipment to reduce noise, stage work to reduce the hourly average equivalent sound level (L_{eq}), and relocate noise-generating activities.</p> <ul style="list-style-type: none"> If the qualified biologist determines that noise cannot be attenuated, noise-generating activities must cease until such time that adequate noise attenuation is achieved, or nesting is complete. <p>MM-BIO-3: Implement a Marine Mammal, Green Sea Turtle, and Fishes Monitoring Program During Pile Installation Activities. Prior to construction activities involving in-water impact hamper pile installation or vibratory pile installation or removal, the project proponent shall prepare a marine mammal, green sea turtle, and fishes monitoring program for implementation. Additionally, the project proponent shall submit the monitoring program to the District for approval 60 days prior to commencing construction involving in-water pile activities and shall include the following requirements within the monitoring program:</p> <ul style="list-style-type: none"> For a period of 15 minutes prior to the start of in-water construction, a qualified biologist, retained by the project proponent and approved by the District, shall monitor an impact radius around the active pile installation areas to ensure that special-status species are not present. The qualified biologist must meet the minimum requirements as defined by the NOAA's <i>Guidance for Developing a Marine Mammal Monitoring Plan</i> (2017). The impact radius shall be established by determining the largest zone of influence associated with in-water construction activities occurring that workday. 	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-BIO-4: Increased Water Turbidity from Disturbance of Submerged Sediments During In-Water Construction Would Limit the Ability of Protected Fish-Foraging Avian Species to Locate Prey and Could Disrupt Eelgrass Productivity. In-water construction activities can suspend sediment that results in water quality and turbidity impacts that limit the ability of fish foraging avian species to locate prey and disrupts eelgrass productivity. Additionally, incidental vessel contact with bottom substrate and vessel propeller wash within shallow areas could result in increased turbidity. This impact would be significant.</p>	PS	<ul style="list-style-type: none"> • The project proponent shall not start work if the qualified biologist observes any special-status species prior to starting pile installation. • In-water pile driving shall begin with soft starts in accordance with Section 4.5 of the District’s Best Management Practices and Environmental Standards for Overwater Structural Repair and Maintenance Activities for Existing Port Facilities Conducted by the San Diego Unified Port District (District 2019), gradually increasing the force of the pile driving. • The qualified biologist shall monitor for avian species, marine mammals, green sea turtles, and fishes within appropriate zones of influence during all pile installation activities in order to identify when any special-status species are approaching or within the appropriate zone of influence, and by coordinating with construction crews to halt pile driving until the species have left this area. <p>MM-BIO-4: Implement Construction Measures to Eliminate Water Quality Impairment Impacts on California Least Tern, Other Sensitive Fish Foraging Avian Species, and Eelgrass. During all in-water construction activities that would disturb sediment, the project proponent shall implement the following construction measures in accordance with applicable Federal, State, and local regulations, including CWA Sections 401 and 404, Rivers and Harbors Act Section 10, the NPDES permit, and Stormwater Management and Discharge Control Ordinance:</p> <ul style="list-style-type: none"> • The project proponent shall implement contractor education for vessel operations. Vessel operators shall be trained that any contact with the bottom from the vessel, barges, anchors, or spuds can suspend sediment that results in water quality and turbidity impacts that limit the ability of fish foraging 	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>avian species to locate prey and disrupt eelgrass productivity. Additionally, vessel operators shall be instructed to minimize activities that direct propeller wash toward shallow areas with substrates that can be suspended and result in increased turbidity.</p> <ul style="list-style-type: none"> • The project proponent shall deploy a turbidity curtain around the pile driving or other sediment-disturbing activity areas to restrict the visible surface turbidity plume to the area of construction. The turbidity curtain shall consist of a hanging ballast-weighted curtain with a surface float line and shall extend from the surface into the water column without disturbing the bottom based on the lowest tidal elevation and swing of the curtain within the water column. The turbidity curtain shall meet the specifications for design, installation, use, performance, and/or modification outlined in the District’s <i>Best Management Practices and Environmental Standards for Overwater Structural Repair and Maintenance Activities for Existing Port Facilities Conducted by the San Diego Unified Port District</i> (District 2019). The goal of this measure is to minimize the area in which visibility of prey by California least terns and other sensitive fish foraging avian species (e.g., California brown pelican) is obstructed. • The project proponent shall follow all regulatory requirements to minimize the reduction in water quality in San Diego Bay. Construction of future development would include preparation and implementation of either a SWPPP in accordance the SWRCB Construction General Permit or a Construction BMP Plan in accordance with the District’s JRMP, and compliance with appropriate regulatory permits (as applicable), including the CWA Section 401 Water Quality Certification, CWA Section 	

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<p>Impact-BIO-5: Potential Disturbance or Destruction of Nests Protected by the ESA and/or CESA, Migratory Bird Treaty Act, and California Fish and Game Code. Removal of existing trees and demolition of existing structures, as well as generation of noise, dust, or nighttime lighting from construction activity, could impede the use of breeding sites during the general avian nesting season (February 15 through August 31). The disturbance or destruction of an occupied nest would be considered a significant impact.</p>	PS	<p>404 permit, and Rivers and Harbors Act Section 10 permit. A full explanation of these requirements can be found in Section 4.8.</p> <ul style="list-style-type: none"> If impacts on eelgrass due to water quality cannot be mitigated through contractor education and deployment of silt curtains, the project proponent shall implement mitigation measures for losses to eelgrass in accordance the CEMP and with MM-BIO-10. <p>The project proponent shall implement MM-WQ-1, Monitoring Turbidity and Constituents of Concern During Construction-Related Sediment Disturbance; MM-WQ-2, Implement Best Management Practices During Construction-Related Sediment Disturbance; and MM-WQ-3, Apply Silt Curtains During Construction-Related Sediment Disturbance, as described in Section 4.8, <i>Hydrology and Water Quality</i>.</p> <p>MM-BIO-5: Avoid Nesting Season for Birds or Conduct Preconstruction Nest Surveys. To ensure compliance with the ESA and/or CESA, MBTA and similar provisions under Sections 3503 and 3503.5 of the California Fish and Game Code, the project proponent shall conduct all vegetation removal (e.g., ornamental trees), demolition of existing structures, and construction activities between September 1 and February 14 (i.e., outside of the general avian nesting season). If the District determines that such avoidance is not feasible, the project proponent shall implement the following:</p> <ul style="list-style-type: none"> The project proponent shall retain a qualified biologist who shall conduct a focused nesting bird survey within potential nesting habitat 1 week prior to the start of vegetation removal, demolition of existing structures, and/or construction activities. The project proponent shall submit the survey to the 	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-BIO-6: Aquaculture-Raised Shellfish Could Impact Essential Fish Habitat Through Reduction of Available Plankton and Organic Particles and Changes to the Benthic Environment. Aquaculture within the</p>	PS	<p>District for review and approval of the survey and the buffer area, defined below, if any, prior to the commencement of these activities at the project site.</p> <ul style="list-style-type: none"> The nesting bird survey area shall include the entire limits of disturbance plus a 300-foot buffer for non-raptors and a 500-foot buffer for raptors to ensure indirect impacts would be avoided. The nesting surveys shall consist of a thorough inspection of the project area by a qualified biologist(s). The survey shall occur between sunrise and 12:00 p.m., when birds are most active. If no active nests are detected during these surveys, the qualified biologist(s) shall prepare and submit to the District a letter report documenting the results of the survey. If there is a delay of more than 7 days between when the nesting bird survey is performed and construction activities begin, the qualified biologist shall resurvey to confirm that no new nests have been established. If the survey confirms nesting within 300 feet of the disturbance footprint for non-raptors or within 500 feet for raptors, the project proponent shall establish a no-disturbance buffer around each nest site to avoid disturbance or destruction of the nest until after the nesting season or a qualified biologist determines that the nest is no longer active. The size and constraints of the no-disturbance buffer shall be determined by the qualified biologist, at the time of discovery, but shall not be greater than 300 feet for non-raptors and 500 feet for raptors. In addition, if the qualified biologist(s) prepares any subsequent reports, the reports shall be submitted to the District 	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>proposed PMPU area allows for the cultivation of shellfish and seaweed. If viewed in the context of available fish habitat and forage, shellfish operations compete with natural populations of fish and invertebrates that consume plankton and organic particles and limit foraging opportunities for coastal pelagic fish species. Additionally, benthic impacts of shellfish aquaculture can result from the presence of gear and equipment, shell debris, and the accumulation of pseudofeces or fouling organisms due to natural processes and dependent upon culture methods. Collectively, these impacts are considered significant.</p>		<p>Habitat and Potential Benthic Impacts. Prior to the District’s approval of any future aquaculture operation involving shellfish, the project proponent shall prepare and submit to the District for approval a Shellfish Aquaculture Mitigation Program. The project proponent shall prepare the Shellfish Aquaculture Mitigation Program in coordination with the appropriate regulatory and resource agencies, as well as the District, and shall implement the program during project design and operation of the future shellfish aquaculture facility. The removal of organic particles and plankton from the water column, the associated impacts on essential fish habitat, and the potential for benthic impacts shall be mitigated through implementation of the following as part of the Shellfish Aquaculture Mitigation Program.</p> <p>Mitigation for Impacts on Essential Fish Habitat:</p> <ul style="list-style-type: none"> • The project proponent shall prepare a mitigation plan that shall use best available science to evaluate the size of the aquaculture facility, the filtration rates and biomass of the cultured species, the mean phytoplankton biomass and production, and the tidal flushing rates of the facility location to determine potential impacts on organic particulate matter food resources. The mitigation plan shall include: <ul style="list-style-type: none"> ○ An adaptive management strategy that accommodates cultivated shellfish density as necessary without significantly affecting food resources available to other organisms in the Bay. <p>Mitigation for Benthic Impacts:</p> <ul style="list-style-type: none"> • The project proponent shall prepare a mitigation plan that evaluates various benthic impacts as affected by the species, and culture methods utilized, the size of the aquaculture facility, accumulation of materials 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-BIO-7: Permanent and Long-Term Overwater Coverage from Introduction of New Structures. The introduction of newly constructed berthing structures for commercial and recreational vessels, and vessels using berthing structures, would result in a permanent increase in overwater coverage. In addition, the introduction of large construction-related structures for prolonged periods of time may result in long-term overwater coverage impacts. The overwater coverage in each of these cases would result in a permanent reduction of potential open water foraging habitat for California least tern and other sensitive fish-foraging species. The overwater coverage also leads to lower primary productivity due to shading. The managed and sensitive species of eelgrass would be impacted in areas where overwater cover shades eelgrass. This lost productivity impacts all higher trophic levels due to the lost production of organic carbon. Primary productivity is impacted any time eelgrass is shaded. In the case of landside structures the level of impact is more variable, and the impact will increase with taller structures and with structures that are closer to the</p>	PS	<p>such as pseudofeces, shell debris, and gear. The mitigation plan shall contain the following elements:</p> <ul style="list-style-type: none"> ○ A monitoring plan that evaluates the seabed beneath and adjacent to the facility to monitor for bacterial mats, sediment hypoxia, benthic infauna, or other indicators of ecosystem health. ○ An adaptive management strategy that responds to negative indicators of benthic health as described in the monitoring plan to appropriately reduce the cultivated shellfish density, as necessary. Site-specific BMPs are to be developed and implemented during construction and operation of the aquaculture facility to lessen or eliminate potential benthic impacts <p>MM-BIO-7: Implement Overwater Coverage Mitigation in Coordination with the Appropriate Resource Agencies and the District to Compensate for Loss of Open Water Habitat. For future development projects that may result in the loss of open water habitat or shading, the project proponent shall implement the following:</p> <ol style="list-style-type: none"> 1. During site-specific environmental review and as required by applicable laws and regulations, the project proponent shall consult with the appropriate resource agencies, including but not limited to, NMFS, CDFW, USFWS, RWQCB, and/or USACE, regarding mitigation of impacts associated with loss of beneficial uses from overwater coverage, loss of open water habitat function, and shading. The project proponent shall secure all applicable permits for the mitigation of overwater coverage prior to commencement of waterside construction. One or more of the appropriate resource agencies may require additional or greater mitigation than 	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>water. Structures with a southern aspect (water to north of structure) will have a greater impact relative to structures with other aspects. This impact would be significant.</p>		<p>specified under options 2.A, 2.B, 2.C, and 2.D of this mitigation measure (see below).</p> <ol style="list-style-type: none"> 2. For impacts that the District determines are significant, a project proponent shall implement one of the following mitigation options, or a combination thereof. These options provide the minimum mitigation for overwater coverage impacts and/or shading impacts. One or more of the appropriate resource agencies may require additional or greater mitigation than specified in this mitigation measure. <ol style="list-style-type: none"> A. Remove an amount of existing overwater coverage within San Diego Bay that is equivalent to the proposed project’s net increase in overwater coverage. This would replace the area affected by a future project at a 1:1 mitigation ratio, subject to the District’s review and approval. B. Restore or create an amount of wetland or eelgrass habitat within San Diego Bay equivalent to the proposed project’s net increase in overwater coverage at a suitable location within San Diego Bay, at a 1:1 ratio for wetlands and a 1.2:1 ratio for eelgrass consistent with the CEMP, which would offset the net increase in overwater coverage by improving the habitat structure and primary productivity at the restoration site. The restoration or creation of wetland or eelgrass habitat shall require the project proponent to prepare a mitigation plan for the District’s review and approval. The mitigation plan at a minimum shall include a description of the 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>restoration site, mitigation requirements, planting plan (e.g., transplant sites, donor sites, reference site), restoration methods (e.g., plant collection or purchase, transplant units), timing of the restoration work, and a monitoring program to include a mitigation success criteria. The mitigation project shall secure all applicable permits and all applicable District Real Estate agreements for the mitigation site prior to commencement of construction. Additionally, all fill materials proposed for discharge into San Diego Bay for the development of the mitigation site shall meet the requirements of the USACE’s <i>Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual (Inland Testing Manual)</i>.</p> <p>C. If a suitable mitigation bank within the Coastal Zone that is not yet available becomes available in the future, prior to construction of the proposed project, the project proponent shall purchase saltmarsh wetland or overwater coverage credits to offset the net increase in overwater coverage.</p> <p>D. Subject to the Board of Port Commissioners’ approval and findings, the project proponent may purchase an amount of credits from the District’s shading credit program established pursuant to BPC Policy 735, at a fair market value, equivalent to that of the project’s final</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-BIO-8: Raptors and Other Large Predatory Birds Using Newly Constructed Structures as Perches to Hunt Protected Avian Species in Their Nesting Habitats. Future development projects under the proposed PMPU that would lead to increasing the susceptibility of protected avian species to predation from raptors and other large predatory birds include the addition of landside structures such as hotels, restaurants, and retail, or the addition of nearshore berthing structures.</p>	PS	<p>shading total (i.e., to the satisfaction of the appropriate resource agencies).</p> <p>E. For projects where landside structures cause shading of eelgrass, the project proponent shall conduct a shading analysis reviewed by a qualified biologist to determine the time and amount of shading for all eelgrass areas impacted by the shading for the District’s review to determine the anticipated impacts on eelgrass. If the shading analysis determines that impacts will occur, then mitigation for the loss of eelgrass will be conducted per the CEMP at a 1.2:1 mitigation ratio based on the amount of impacted eelgrass.</p> <p>F. For overwater coverage, a qualified biologist shall conduct eelgrass surveys per the CEMP to determine potential impacts on eelgrass from construction.</p> <ul style="list-style-type: none"> • If pre- versus post-construction eelgrass surveys determine that overwater structures will shade and impact eelgrass, then mitigation for the loss of eelgrass will be conducted pursuant to the CEMP at a 1.2:1 mitigation ratio based on the amount of impacted eelgrass <p>MM-BIO-8: Implement Raptor Perching Deterrent Measures on New Structures. Prior to the District’s approval of a future development project, the project proponent shall retain a qualified biologist, approved by the District and familiar with local sensitive species, to review the project plans for the following:</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>The addition of these structures could inadvertently create permanent additional perches for raptors and other large predatory birds that prey on other marine-based protected species. This impact would be significant.</p>		<ol style="list-style-type: none"> 1. Proximity of the proposed structure (i.e., within 500 feet) to sensitive avian nesting, loafing, or foraging habitat. 2. Potential for the proposed structure to act as a perch for raptors that may prey on any nearby sensitive avian species. <p>In the event that the qualified biologist identifies that both of the above conditions exist, the project proponent shall implement one or more of the following mitigation measures to mitigate the impact, as determined by the District.</p> <ul style="list-style-type: none"> • Install avian perching deterrents such as spikes on top of structures that can act as perches, such as pilings, building ledges, posts, fences, lights and ornaments. • Redesign structures and features of structures to prevent perching such as by use of pointed or uneven surfaces and recessing lights and ornaments that protrude from structures. 	
<p>Impact-BIO-9: Bird Strikes Resulting from Use of Reflective Materials. Use of reflective building and glass finishes may confuse birds in flight, leading to an increase in strikes. Future activities under the proposed PMPU that could result in increased bird strike potential include construction of new hotels and meeting space, restaurants, and retail in PD2 and PD3, if the future new buildings would not be surrounded by existing buildings that are taller. The increased potential for bird strikes would be a significant impact on avian species protected under the MBTA and sensitive and listed species protected under ESA and/or CESA. This impact would be significant.</p>	<p>PS</p>	<p>MM-BIO-9: Implement Bird Strikes Reduction Measures on New Structures. Prior to the District’s approval of a future development project proposing the use of reflective surfaces and/or glass finishes, building plans shall be reviewed by a qualified biologist familiar with avian species, retained by the project proponent and approved by the District, to verify that the proposed building has incorporated specific design strategies that qualify for Leadership in Energy and Environmental Design (LEED) credits, as described in the American Bird Conservancy’s <i>Bird-Friendly Building Design</i> (Sheppard and Phillips 2015) or an equivalent guide to avoid or reduce the potential for bird strikes. Final building design must demonstrate to the satisfaction of the qualified biologist and the District, as well as be confirmed by USFWS and/or CDFW, that</p>	<p>LTS</p>

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>design strategies, in accordance with the <i>Bird-Friendly Building Design</i>, have been incorporated and approved by the District. Design measures shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • Building Façade and Site Structures <ul style="list-style-type: none"> ○ Develop a building façade and site design that are visible as physical barriers to birds • Incorporate elements like windows, netting, screens, grilles, shutters, and exterior shades to preclude collisions <ul style="list-style-type: none"> ○ Incorporate materials that have a low threat potential based on the Bird Collision Threat Rating and the Bird Collision Threat Rating Calculation Spreadsheet to achieve a maximum total building Bird Collision Threat Rating of 15 or less. <ul style="list-style-type: none"> • Least Threat Potential: Opaque Surface • Exterior Lighting <ul style="list-style-type: none"> ○ Fixtures not necessary for safety, entrances, and circulation shall be automatically shut off from midnight until 6:00 a.m. ○ Lighting is to be shaded and face down with a minimum spread to avoid lighting off site. ○ Exterior luminaires must meet these requirements for all exterior luminaires located inside project boundary based on the following: <ul style="list-style-type: none"> • Photometric characteristics of each luminaire shall be mounted in the same orientation and tilt as specified in the project design; and • The project shall be classified under one lighting zone using the lighting zones definitions provided in the <i>Illuminating Engineering Society and International Dark Sky Association (IES/IDA) Model Lighting Ordinance (MLO) User Guide (2011)</i>. 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-BIO-10: Temporary Water Quality and Sedimentation Impacts on Eelgrass Beds During Project Construction. The construction of overwater berthing structures and aquaculture facilities would require in-water construction activities such as pile driving, equipment storage, and barge and other construction vessel operations. These activities would induce temporary water quality impacts in instances where measures provided under MM-BIO-4 could not prevent impacts on eelgrass beds.</p>	PS	<ul style="list-style-type: none"> • Performance Monitoring Plan <ul style="list-style-type: none"> ○ The project proponent shall develop a 3-year post-construction monitoring plan to routinely monitor the effectiveness of the building and site design in preventing bird collisions. The post-construction monitoring plan shall include methods to identify and document locations where repeated bird strikes occur, the number of collisions, the date, the approximate time, and features that may be contributing to collisions. The post-construction monitoring plan shall list potential design solutions and provide a process for voluntary corrective action. ○ The project proponent shall provide an annual performance monitoring report demonstrating which design strategies have been incorporated and the results of performance monitoring for review and approval by the District. <p>MM-BIO-10: Implement Eelgrass Mitigation and Monitoring in Compliance with the California Eelgrass Mitigation Policy. To reduce eelgrass shading or other impacts during construction and operation of future development allowed under the proposed PMPU, the project proponent shall implement the following measures prior to the commencement of any future development project that has the potential to cause temporary or permanent eelgrass impacts, as determined by the District during project-specific environmental review. All mitigation and monitoring requirements shall be performed in accordance with the CEMP (NMFS 2014).</p> <ul style="list-style-type: none"> • The project proponent shall retain a qualified biologist approved by the District, to conduct a preconstruction eelgrass survey during the project planning phase prior to commencement of 	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>construction activities. Surveys for eelgrass will be conducted during eelgrass growing season (March–October), and results will be valid for 60 days, unless completed in September or October; if completed in September or October, results will be valid until resumption of next growing season. The project proponent shall provide the preconstruction eelgrass survey to the District and the NMFS as well as regulatory points of contact for agencies that will be required to provide project permits such as the CDFW, CCC, USACE, and San Diego RWQCB.</p> <ul style="list-style-type: none"> • If the results of project planning (e.g., proposed overwater structures or shading analysis) identify potential impacts on eelgrass, the project proponent shall consult with the NMFS, CCC, USACE, RWQCB, and the District to determine appropriate mitigation to achieve the 1.2:1 eelgrass mitigation ratio specified in the CEMP. A qualified biologist shall then prepare an eelgrass mitigation plan for the District’s review and approval. The qualified biologist shall also submit the plan to the NMFS for review and consultation. The eelgrass mitigation plan shall identify the potential extent of eelgrass impact; the means, methods, and location to mitigate for impacts; and mitigation success criteria; and shall provide a monitoring schedule to monitor for mitigation success. • Projects may reference a baywide eelgrass survey for planning purposes (i.e., during environmental review), and are required to conduct a preconstruction survey within 30 days of initiating construction per the CEMP. • The qualified biologist shall also prepare and submit to the District, NMFS, and other pertinent agencies a post-construction eelgrass survey. The post-construction survey shall be conducted within 30 days of completion of construction. If construction 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>ends during the non-growing season (November 1 to February 28), the monitoring shall be delayed until the resumption of the growing season. The post-construction survey shall document the extent of eelgrass impacts following project completion.</p> <ul style="list-style-type: none"> • For projects with anticipated long-term impacts on eelgrass where the extent of impact cannot be determined immediately following construction, the qualified biologist shall also perform at least 2 years of annual post-construction eelgrass surveys. The results of the surveys shall be submitted to the District, NMFS, other pertinent agencies for review. These annual surveys shall evaluate if any longer-term or operational impacts were caused to eelgrass. Specifically, the surveys shall be designed to evaluate potential shading, vessel movements or/any other potential impacts. • The project proponent shall commence implementation of the eelgrass mitigation in accordance with the eelgrass mitigation plan within 135 days of any impacts on eelgrass identified in the post-construction survey report(s). • The project proponent shall implement mitigation performance monitoring at 0, 12, 24, 36, 48, and 60 months as required by the CEMP and consistent with the eelgrass mitigation plan after completing of eelgrass transplanting or restoration as specified in the eelgrass mitigation plan. All performance standards shall be in accordance with the CEMP. • In the event that impacts on eelgrass are detected during the 2-year post-construction period, the project proponent shall provide additional mitigation for eelgrass impacts by transplanting eelgrass at a suitable restoration site at a ratio of 1.2:1. Conservative mitigation planning can avoid this additional mitigation through planning for long-term 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-BIO-11: Permanent Overwater Shading of Eelgrass Beds by Newly Constructed Structures. Operational impacts on marine resources would potentially include permanent overwater shading of eelgrass beds by newly built permanent overwater structures (e.g., piers, docks), and potentially from newly built landside structures, depending on the height and locations of those structures relative to San Diego Bay and any eelgrass beds. Any future development project that causes shading over eelgrass beds would impact eelgrass by reducing the photosynthetic production and therefore plant production. Because of the uncertainty regarding the height and other characteristics of future development projects that may be adjacent to San Diego Bay and eelgrass beds, permanent eelgrass shading impacts are considered significant.</p>	PS	<p>impacts and providing eelgrass transplantation prior to monitoring and evaluation of all impacts.</p> <p>Implement MM-BIO-10, as described above.</p>	LTS
<p>Impact-BIO-12: Direct Loss of Eelgrass from Dredging Activities. Any construction activities that would involve dredging or fill of underwater habitat could directly impact eelgrass if present within the footprint of these activities. Dredging bottom habitat containing eelgrass beds would uproot existing eelgrass. Fill of submerged habitats would entirely cover all eelgrass if present, which would be considered a significant impact.</p>	PS	<p>Implement MM-BIO-10, as described under Threshold 2.</p>	LTS
<p>Impact-BIO-13: Permanent Alteration of Bay Water Hydrodynamics due to the Placement of Pile Clusters. Newly installed pile clusters could result in permanent alteration of Bay water hydrodynamics, which would be considered a significant impact.</p>	PS	<p>MM-BIO-11: Implement Measures that Improve Water Quality, Enhance Habitat, Restore Habitat, or Purchase Credits in a Mitigation Bank. The project proponent shall implement the following:</p> <ol style="list-style-type: none"> 1. As required by applicable law or regulation, the project proponent shall obtain permits from the RWQCB and USACE to meet requirements under Sections 401 and 404 of the CWA and Section 10 of the RHA. Appropriate mitigation measures such as 	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>those described below shall be developed through consultation with the appropriate resource agencies, including but not limited to, NMFS, CDFW, USFWS, RWQCB, and/or USACE. The mitigation measure(s) shall be described in permit applications filed with the RWQCB and USACE such that they can be incorporated as permit conditions to be implemented by the project proponent. One or more of the appropriate resource agencies may require additional or greater mitigation than specified under options 2.A, 2.B, 2.C, and 2.D of this mitigation measure.</p> <p>2. Prior to the commencement of construction activities, the project proponent shall implement one of the following mitigation options, or a combination thereof. The below options provide the minimum mitigation for structural fill impacts associated with altered hydrodynamics.</p> <p>A. Remove an amount of existing fill, such as pilings, equivalent to the proposed project’s net increase in fill from structures placed within San Diego Bay, which would replace the area affected by the proposed project at a 1:1 mitigation ratio, subject to the District’s review and approval.</p> <p>B. Restore or create an amount of wetland or eelgrass habitat equivalent to the proposed project’s net increase in fill or fill associated impacts at a suitable location within San Diego Bay at a 1:1 ratio for wetlands and a 1.2:1 ratio for eelgrass consistent with the California Eelgrass Mitigation Policy, which would offset the net increase in fill by improving the habitat</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>structure and primary productivity. The restoration or creation of wetland or eelgrass habitat shall require the project proponent to retain a qualified biologist to prepare and submit a mitigation plan for the District’s review and approval, which shall include a description of the restoration site, mitigation requirements, planting plan (e.g., transplant sites, donor sites, reference site), restoration methods (e.g., plant collection or purchase, transplant units), timing of the restoration work, and a monitoring program (e.g., establishment of monitoring and mitigation success criteria). The project proponent shall obtain all applicable permits and all applicable District Real Estate agreements for the mitigation site prior to commencement of construction. Additionally, all fill materials proposed for discharge into San Diego Bay for the development of the mitigation site shall meet the requirements of the USACE’ <i>Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual (Inland Testing Manual)</i>.</p> <p>C. If a suitable mitigation bank within the Coastal Zone that is not yet available becomes available in the future, prior to construction of the proposed project, the project proponent shall purchase saltmarsh wetland or overwater coverage credits to offset the proposed project’s net increase in fill. The</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-BIO-14: Reduction in the Ecological Value of Benthic Communities from Increased Depths Created by Dredging Activities. Ongoing dredging of underwater habitat would temporarily lower the ecological value of benthic communities, which would be considered a significant impact.</p>	PS	<p>District shall balance the impacts of the fill against the benefits provided by the mitigation bank to determine the appropriate credit purchase required.</p> <p>D. Subject to the Board of Port Commissioners' approval and findings, the project proponent may purchase credits from the District's shading credit program established pursuant to BPC Policy 735 at a fair market value. The District shall determine the equivalency of fill impact and shading credit by comparing the ecological and hydrological losses associated with the fill to the increased value of ecosystem productivity achieved through reduced shading.</p>	LTS
<p>Impact-BIO-15: Potential for Future Projects to Result in a Conflict with the Integrated Natural Resources Management Plan. The PMPU provides the general policy framework for future projects to abide with and has several policies that are intended to protect the environment and the natural resources within the Tidelands. While the proposed PMPU goals, objectives, and policies are not in conflict with the INRMP, it cannot be determined at the programmatic level of analysis contained with this PEIR exactly where and how future projects, consistent with the proposed PMPU, would be implemented. This includes considerations such as the</p>	PS	<p>Implement MM-BIO-1 through MM-BIO-11, as described above under Threshold 1.</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>exact location and siting of development projects and related activities such as material laydown and construction staging areas in relation to natural resources and environmentally sensitive areas. Because significant impacts on biological resources were identified under Thresholds 1 through 4, implementation of the proposed PMPU would have the potential to conflict with the INRMP.</p>	PS	Implement MM-BIO-1 , as described above.	LTS
<p>Impact-C-BIO-1: In-Water Construction-Induced Noise Impacts Disrupting Foraging Behavior of Sensitive Avian Species such as California Least Tern and California Brown Pelican. In-water construction-induced noise impacts from overwater construction activities such as pile driving could disrupt the foraging behavior of the California least tern if construction occurs during the California least tern nesting season, as well as other sensitive fish-foraging avian species such as California brown pelican. This impact would be significant.</p>	PS	Implement MM-BIO-2 , as described above.	LTS
<p>Impact-C-BIO-2: Construction Noise Impacts on Nesting Behavior of Marine Dependent Species Protected under the Migratory Bird Treaty Act and California Fish and Game Code. Construction induced noise impacts from landside and overwater construction activities can disturb nesting marine dependent bird species protected under the MBTA and California Fish and Game Code. Disturbance can lead to nest abandonment or altered behavior that results in lowered nesting success. This impact would be potentially significant.</p>	PS	Implement MM-BIO-3 , as described above.	LTS
<p>Impact-C-BIO-3: In-Water Pile Driving Activity Could Generate Noise Levels that Could Injure (Level A Harassment) or Alter the Behavior of (Level B Harassment) Marine Mammals, Green Sea Turtles, and Fishes. In-water pile driving activities could</p>	PS	Implement MM-BIO-3 , as described above.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>generate enough underwater noise to physically injure marine mammals, green sea turtles, and fishes should impact hammer or vibratory pile driving occur during construction. Any noise related impacts would be dependent on the type of activity being performed, the proximity to marine waters, and the biology of the considered species. In-water impact hammer or vibratory pile driving activity by comparison could potentially generate enough underwater noise to injure (Level A Harassment) or alter behavior (Level B Harassment) for marine mammals, green sea turtles, and fishes. This impact would be significant.</p>			
<p>Impact-C-BIO-4: Increased Water Turbidity from Disturbance of Submerged Sediments During In-Water Construction Would Limit the Ability of Protected Fish-Foraging Avian Species to Locate Prey and Could Disrupt Eelgrass Productivity. In-water construction activities can suspend sediment that results in water quality and turbidity impacts that limit the ability of fish foraging avian species to locate prey and disrupts eelgrass productivity. Additionally, incidental vessel contact with bottom substrate and vessel propeller wash within shallow areas could result in increased turbidity. This impact would be significant.</p>	PS	Implement MM-BIO-4 , as described above.	LTS
<p>Impact-C-BIO-5: Potential Disturbance or Destruction of Nests Protected by the ESA and/or CESA, Migratory Bird Treaty Act, and California Fish and Game Code. Removal of existing trees and demolition of existing structures, as well as generation of noise, dust, or nighttime lighting from construction activity, could impede the use of breeding sites during the general avian nesting season (February 15 through August 31). The disturbance or destruction of an occupied nest would be considered a significant impact.</p>	PS	Implement MM-BIO-5 , as described above.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-C-BIO-6: Aquaculture-Raised Shellfish Could Impact Essential Fish Habitat through Reduction of Available Plankton and Organic Particles and Changes to the Benthic Environment. Aquaculture within the proposed PMPU area allows for the cultivation of shellfish and seaweed. If viewed in the context of available fish habitat and forage, shellfish operations compete with natural populations of fish and invertebrates that consume plankton and organic particles and limit foraging opportunities for coastal pelagic fish species. Additionally, benthic impacts of shellfish aquaculture can result from the presence of gear and equipment, shell debris, and the accumulation of pseudofeces or fouling organisms due to natural processes and dependent upon culture methods. Collectively, these impacts are considered significant.</p>	PS	Implement MM-BIO-6 , as described above.	LTS
<p>Impact-C-BIO-7: Permanent and Long-Term Overwater Coverage from Introduction of New Structures. The introduction of newly constructed berthing structures for commercial and recreational vessels, vessels using berthing structures would result in a permanent increase in overwater coverage. In addition, the introduction of large construction-related structures for prolonged periods of time may result in long-term overwater coverage impacts. The overwater coverage in each of these cases would result in a permanent reduction of potential open water foraging habitat for California least tern and other sensitive fish-foraging species. The overwater coverage also leads to lower primary productivity due to shading. The managed and sensitive species of eelgrass would be impacted in areas where overwater cover shades eelgrass. This lost productivity impacts all higher trophic levels due to the lost production of organic</p>	PS	Implement MM-BIO-7 , as described above.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>carbon. Primary productivity is impacted anytime eelgrass is shaded. In the case of landside structures the level of impact is more variable and the impact will increase with taller structures and with structures that are closer to the water. Structures with a southern aspect (water to north of structure) will have a greater impact relative to structures with other aspects. This impact would be significant.</p>			
<p>Impact-C-BIO-8: Raptors and Other Large Predatory Birds Using Newly Constructed Structures as Perches to Hunt Protected Avian Species in their Nesting Habitats. Future development projects under the proposed PMPU that would lead to increasing the susceptibility of protected avian species to predation from raptors and other large predatory birds include the addition of landside structures such as hotels, restaurants, and retail, or the addition on nearshore berthing structures. The addition of these structures could inadvertently create permanent additional perches for raptors and other large predatory birds that prey on other marine-based protected species. This impact would be significant.</p>	PS	Implement MM-BIO-8 , as described above.	LTS
<p>Impact-C-BIO-9: Bird Strikes Resulting from Use of Reflective Materials. Use of reflective building and glass finishes may confuse birds in flight, leading to an increase in strikes. Future activities under the proposed PMPU that could result in increased bird strike potential include construction of new hotels and meeting space, restaurants, and retail in PD2 and PD3, if the future new buildings would not be surrounded by existing buildings that are taller. The increased potential for bird strikes would be a significant impact on avian species protected under the MBTA and sensitive and listed species</p>	PS	Implement MM-BIO-9 , as described above.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
protected under ESA and/or CESA. This impact would be significant.			
<p>Impact-C-BIO-10: Temporary Water Quality and Sedimentation Impacts to Eelgrass Beds During Project Construction. The construction of overwater berthing structures and aquaculture facilities would require in-water construction activities such as pile driving, equipment storage, and barge and other construction vessel operations. These activities would induce temporary water quality impacts in instances where measures provided under MM-BIO-4 could not prevent impacts to eelgrass beds.</p>	PS	Implement MM-BIO-9 , as described above.	LTS
<p>Impact-C-BIO-11: Permanent Overwater Shading of Eelgrass Beds by Newly Constructed Structures. Operational impacts on marine resources would potentially include permanent overwater shading of eelgrass beds by newly built permanent overwater structures (e.g., piers, docks), and potentially from newly built landside structures, depending on the height and locations of those structures relative to San Diego Bay and any eelgrass beds. Any future development project that causes shading over eelgrass beds would impact eelgrass by reducing the photosynthetic production and therefore plant production. Because of the uncertainty regarding the height and other characteristics of future development projects that may be adjacent to San Diego Bay and eelgrass beds, permanent eelgrass shading impacts are considered significant.</p>	PS	Implement MM-BIO-10 , as described above.	LTS
<p>Impact-C-BIO-12: Direct Loss of Eelgrass from Dredging Activities. Any construction activities that would involve dredging or fill of underwater habitat could directly impact eelgrass if present within the</p>	PS	Implement MM-BIO-10 , as described above.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>footprint of these activities. Dredging bottom habitat containing eelgrass beds would uproot existing eelgrass. Fill of submerged habitats would entirely cover all eelgrass if present, which would be considered a significant impact.</p>	PS	Implement MM-BIO-11 , as described above.	LTS
<p>Impact-C-BIO-13: Permanent Alteration of Bay Water Hydrodynamics due to the Placement of Pile Clusters. Newly installed pile clusters could result in permanent alteration of Bay water hydrodynamics, which would be considered a significant impact.</p>	PS	Implement MM-BIO-10 , and MM-BIO-11 , as described above.	LTS
<p>Impact-C-BIO-14: Reduction in the Ecological Value of Benthic Communities from Increased Depths Created by Dredging Activities. Ongoing dredging of underwater habitat would temporarily lower the ecological value of benthic communities, which would be considered a significant impact.</p>	PS	Implement MM-BIO-1 through MM-BIO-11 , as described above.	LTS
<p>Impact-C-BIO-15: Potential for Future Projects to Result in a Conflict with the Integrated Natural Resources Management Plan. The PMPU provides the general policy framework for future projects to abide and has several policies that are intended to protect the environment and the natural resources within the Tidelands. While the proposed PMPU goals, objectives, and policies are not in conflict with the Integrated Natural Resources Management Plan, it cannot be determined at the programmatic level of analysis contained with the proposed PMPU PEIR exactly where and how future projects, consistent with the proposed PMPU, would be implemented. This includes considerations such as the exact location and siting of development projects and related activities such as material laydown and construction staging areas in relation to natural resources and environmentally</p>	PS	Implement MM-BIO-1 through MM-BIO-11 , as described above.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>sensitive areas. Because significant impacts on biological resources were identified under Thresholds 1-4, implementation of the proposed PMPU would have the potential to conflict with the Integrated Natural Resources Management Plan.</p>			
4.4 Cultural Resources and Tribal Cultural Resources			
Project Impacts			
<p>Impact-CUL-1: Future Construction Activities Within the Proposed PMPU Area May Adversely Impact Current and Future Significant Historical Resources. Future construction activities consistent with the proposed PMPU would have the potential to:</p> <ol style="list-style-type: none"> 1. Demolish a historical resource. 2. Alter a historical resource such that it no longer retains sufficient historical integrity to convey significance. 3. Alter the setting of a historical resource for which the setting is in important character-defining feature that expresses the resource’s significance. <p>Any one of these outcomes would be considered a significant impact on a historical resource.</p>	PS	<p>MM-CUL-1: Conduct a Historical Resource Assessment. Concurrently with any application submitted to the District for development activity that may cause a substantial adverse change, as defined in State CEQA Guidelines 15064.5(b)(1), in the significance of a historical resource, the project proponent shall be required to submit a historical resource assessment prepared by a Secretary of the Interior’s (SOI) Standards-qualified architectural historian approved by the District. Development activities that could cause a substantial adverse change in the significance of a historical resource include those that would potentially demolish or diminish the historical integrity of a building or structure that is equal to or greater than 50 years old, or which will be equal to or greater than 50 years old at the time disturbance of the building or structure occurs.</p> <p>In order to determine if there are one or more historical resources in a proposed project, the historical resource assessment shall be completed according to the following steps: (i) define an appropriate historical resources study area for the proposed project, (ii) survey and research the area to identify built resources known to qualify as historical resources under CEQA as a result of previous designation, and (iii) formally evaluate built resources not previously designated that could potentially qualify as historical resources under CEQA by applying the criteria for listing in the CRHR</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>(California Code of Regulations [CCR], Title 14, Section 4852).The study area shall account for potential direct and indirect impacts on historical resources, including alterations to the immediate setting of any historical resource that could cause an adverse change in the resource’s significance. Based on the historical resource assessment and analysis of project activities, the District shall determine if any built environment resources qualifying as historical resources will be subject to potentially significant impacts from the project as defined by Section 15064.5(b)(1) of the State CEQA Guidelines. The District shall determine that a future project may have a significant impact on a historical resource if the proposed project:</p> <ul style="list-style-type: none"> • Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR (State CEQA Guidelines Section 15064.5[b][2][A]), or • Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to PRC Section 5024.1(g), unless the District reviews the effects of the project and establishes by a preponderance of evidence that the resource is not historically or culturally significant (State CEQA Guidelines Section 15064.5[b][2][B]), or • Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR was determined by the District for purposes of CEQA (State CEQA Guidelines Section 15064.5[b][2][C]). 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>If the proposed project would directly or indirectly impact an historical resource, the District shall identify feasible mitigation measures appropriate to avoid, minimize, or otherwise substantially reduce significant impacts. Mitigation measures shall include one or more of the following, in the following order of preference:</p> <ol style="list-style-type: none"> 1. Avoidance. The project proponent shall avoid demolition or materially altering the historical resource by avoidance measures, such as the following: <ul style="list-style-type: none"> ○ Establish environmentally sensitive areas, including all or part of a historical resource depending on its spatial relationship to project activities, and arrange for them to be identified and protected by clearly defined barriers during construction to ensure avoidance. ○ Conduct a construction condition assessment(s) or Historic Structure Report(s) of historical resources adjacent to construction to determine if those resources are at risk of being damaged, including a determination of tolerable levels of construction vibration and potential for damage. ○ Redesign relevant portions of the proposed project to avoid destruction or damage to the historical resource. ○ Design and implementation of stabilization measures to ensure that fragile built resources are not damaged by construction activities, and that any stabilization measures are implemented in accordance with SOI Standards for the Treatment of Historic Properties (USDI NPS 2020). ○ Temporarily move built resources. <p>In implementing avoidance measures, the project proponent shall arrange for an SOI-qualified</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>architectural historian or historic architect, approved by the District, to participate in preconstruction meetings and construction monitoring activities to ensure continuing adherence to avoidance measures.</p> <ol style="list-style-type: none"> Alteration of Historical Resources in Accordance with SOI Standards. If the District determines that a project cannot avoid a historical resource, the project proponent shall design the proposed project to comply with SOI Standards for the Treatment of Historic Properties (SOI Standards) and thereby avoid any impacts that could cause an adverse change in the significance of a historical resource (USDI NPS 2020). The project proponent shall retain an SOI- qualified architectural historian or historic architect (approved by the District) to identify the applicable SOI Standards, assist in the project design, review the design plans, and provide a written report to the District assessing the design plans’ compliance with the applicable SOI Standards. The District shall review the report and confirm the design plans’ compliance with the applicable SOI Standards. The project proponent shall adhere to the design plan approved by the District. This will ensure that alterations to the historical resource are implemented in accordance with the SOI Standards and that the historical resource retains sufficient character-defining features to express its historical significance. Relocation. If the District determines that it would not be feasible to minimize significant impacts on a historical resource through avoidance or by designing the project to comply with the SOI Standards, the project proponent shall retain a 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>District-approved, SOI-qualified historic architect or architectural historian to provide measures and oversight for the relocation of a significant historic building that would otherwise be demolished, altered, or subject to neglect and deterioration if the proposed project is implemented. The SOI-qualified professional shall prepare a historic building relocation plan at the project proponent’s expense. The relocation plan shall identify the site where the resource would be relocated as well as all relevant permits required for the resource to be moved from its existing location and transported to the relocation site. The relocation plan shall identify the qualifications required of the building relocation company to ensure that relocation is undertaken by a company experienced in moving historic buildings comparable to the building subject to potential significant impacts from the proposed project. The relocation plan shall ensure that the building will be moved without irreparable damage to the character-defining historic fabric of the building and shall specify protective measures for vulnerable character-defining features. The project proponent shall incorporate into construction specifications for the proposed project a requirement that the building relocation company and the construction contractor(s) use all feasible means to avoid damage to the historic building during its relocation, including, but not limited to, relocation methods and relocation activity routes, closures, and timing. The District shall review and provide final approval of the historic building relocation plan. The project proponent shall implement the relocation plan.</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>3. Historical Resource Archival Documentation. If the District determines that it would not be feasible to minimize significant impacts on a historical resource through avoidance, designing the project to comply with the SOI Standards, or relocation of the historical resource, archival documentation shall be prepared if the resource is the type of historical resource for which archival documentation would reduce the impact. Historical resources for which archival documentation can reduce an impact are generally those recognized as significant (i) for their architectural design or engineering qualities; (ii) for exemplifying the work of a master architect, builder, or engineer; or (iii) for embodying the distinctive characteristics of a type, period, or method of construction. The level of archival documentation shall be determined by the District based on the evidence in the record. The project proponent shall arrange for the preparation of archival documentation of the historical resource by an SOI-qualified architectural historian or historian and a professional photographer, approved by the District, at the project proponent’s expense. The documentation shall consist of archival photography, written data (physical description and historical narrative), and, depending on the historical resource’s level of significance, measured drawings to be distributed to one or more appropriate local repositories. Potentially appropriate repositories include the San Diego Public Library, the San Diego History Center, other local historical societies, the San Diego Maritime Museum, and local university library special</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>collections. Archival documentation of historical resources shall be prepared in accordance with the National Parks Service’s (NPS) guidelines for Historic American Buildings Survey (HABS) Historic American Landscape Survey (HALS) and Historic American Engineering Record (HAER) documentation. The level and degree of documentation shall be determined by the District and shall be commensurate with the size, extent, and level of the documented historical resource’s significance. The District shall review and approve all archival documentation prepared as historical resource mitigation prior to its submittal to the chosen repository or repositories. The project proponent shall submit the District-approved archival documentation and confirm its receipt by the repository or repositories.</p>	
		<p>4. Interpretation. If it is not feasible to minimize significant impacts on a historical resource through avoidance, designing the project to comply with the SOI Standards, or relocation of the historical resource, as determined appropriate by the District the project proponent shall arrange for a District-approved SOI-qualified architectural historian or historian to prepare appropriate historical resource interpretive or educational media at the project proponent’s expense. Historical resources for which interpretive or educational media would reduce the impact are generally those that have significance for (i) direct association with an event or pattern of events important to history, or (ii) for direct association with the life of a historically significant individual. The type of interpretive or educational</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>media shall be determined by the District based on the evidence in the record. The SOI-qualified preservation professional shall work with the District and the project proponent to determine the type of interpretive media that is appropriate for the impacted historical resource. Such interpretive or educational media may include displays in public spaces, print materials, or websites. Interpretive and educational media may incorporate written, photographic, and archival documentation (such as those compiled according to NPS HABS/HAER/HALS guidelines) oral history interviews, video, or animation to tell the story of the heritage represented by the impacted resource. At the expense of the project proponent, the District-approved SOI-qualified historic preservation professional shall prepare the chosen type of interpretive or educational media with District approval. The District shall review the interpretive or educational media prior to final approval. The project proponent shall be responsible for displaying or providing public access to the interpretive or educational media.</p>	
		<p>5. Materials Salvage. If it is not feasible to minimize significant impacts on a historical resource through avoidance, designing the project to comply with the SOI Standards, or relocation of the historical resource, and a historical resource is subject to complete or partial demolition from a proposed project, the project proponent shall arrange for salvage of historically important materials as deemed appropriate by the District. The project proponent shall arrange for a District-approved SOI-</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-OPT3-CUL-1: Future Construction Activities Associated with Option 3 May Adversely Impact Current and Future Significant Historical Resources Within North Embarcadero. Future construction activities associated with Option 3 would have the potential to impact the County Administration Center (CAC), which is listed on the NRHP and the CRHR, as well as structures that are over or will be over 50 years old, by:</p> <ol style="list-style-type: none"> 1. Demolishing contributing elements of a historical resource; 2. Altering a historical resource such that it may no longer retains sufficient historical integrity to convey significance; 	PS	Implement MM-CUL-1 as described above.	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>3. Altering the setting of a historical resource for which the setting is in important character-defining feature that expresses the resource’s significance.</p> <p>Any one of these outcomes would be considered a significant impact on a historical resource.</p>	PS	<p>MM-CUL-2: Conduct an Archaeological Resource Assessment. Prior to any approval of a future discretionary project (as defined by the CEQA Guidelines Section 15357) with ground-disturbing activities, the project proponent shall retain an SOI-qualified archaeologist to prepare an Archaeological Resources Assessment (ARA), which shall be submitted to the District for its review and approval. The ARA is a preliminary inquiry into the potential for archaeological resources being present on site and will assist the District in determining if a future project may or may not have an effect on archaeological sites that are historical resources or unique archaeological resources, per State CEQA Guidelines Section 15064.5(1-4) and PRC Section 21083.2(g).</p> <p>In order to determine if there are one or more archaeological historical resources or unique archaeological resources in a proposed project, the ARA shall be completed according to the following steps:</p> <ol style="list-style-type: none"> Desktop Analysis. The ARA shall define an appropriate archaeological study area for the proposed project, and research the study area to determine its sensitivity for subsurface archaeological resources. Research shall include but is not limited to reviewing the prehistoric archaeological sensitivity analysis under Archaeological Resources in Section 4.4.2 of the PMPU PEIR, a records search, and a review of historic maps such as Sanborn fire insurance and 	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>U.S. Geological Survey (USGS) topographic maps. The ARA shall make recommendations regarding the need for further archaeological studies to be completed. If the ARA shows to the District’s satisfaction that the study area consists entirely of fully developed fill with no undisturbed land, or entirely of land with little or no potential for subsurface prehistoric or historic archaeological resources preserved within depositional context, no field survey, additional study, or measures for protecting archaeological resources that are historical resources, or qualify as a unique archaeological resource, would be necessary. A brief ARA memo shall serve as documentation of the findings.</p> <p>Based on the information and recommendations provided in the ARA memo, if further archaeological studies are required, the project proponent shall take one or more of the following sequential actions, which are determined by the District to be necessary to avoid or reduce the proposed project’s impacts on archaeological resources that are historical resources, or qualify as a unique archaeological resource, to a level below significance:</p> <ol style="list-style-type: none"> 1. Archaeological Survey. If the ARA finds that the study area contains previously identified prehistoric or historic archaeological resources preserved in depositional context, undeveloped land with undisturbed or minimally disturbed surface soils, or historic archaeological resource potential based on historic map research, the project proponent will retain an SOI-qualified archaeologist (approved by the District) to conduct a preconstruction 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>archaeological resources field survey of the project area.</p> <p>2. Archaeological Testing and Evaluation. If the District determines that the resource cannot be avoided through project design, the SOI-qualified archaeologist retained by the project proponent shall implement an evaluative subsurface testing program to determine the resource boundaries within the project area, assess the site’s eligibility for listing in the NRHP and CRHR, or for its potential to be a unique archaeological resource, and assess the integrity of the resource, all subject to verification and approval from the District. The testing and evaluation program shall be used to determine whether the site is a historical resource or unique archaeological resource. The SOI-qualified archaeologist shall prepare an Archaeological Survey Evaluation Report (ASER) at the conclusion of the field survey and evaluative subsurface testing program. The ASER will conform with the California Office of Historic Preservation (OHP) recommended contents and format for cultural resources reports. The report shall be submitted to the District for review and, upon the District’s determination that the report is satisfactory, shall be deposited at the SCIC.</p> <p>If the District determines the site is not a historical resource or a unique archaeological resource, the effects of the project on the resource shall not be considered a significant effect on the environment and need not be considered further in the CEQA process, per State CEQA Guidelines Section</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>15064.5(c)(4). If the archaeological site is a historical resource, and where impacts may occur to a historical resource, the District would require one or more of the following measures in MM-CUL-2. If an archaeological site is not a historical resource but meets the definition of a unique archeological resource in Section 21083.2 of the PRC, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in PRC Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.</p> <p>3. Preservation in Place. Preservation in place is the preferred manor of mitigating impacts on archaeological historical resources and unique archaeological resources. If the District determines the site is a historical resource or unique archaeological resource, and the project can be designed to avoid the historical resource or unique archaeological resource, preservation in place may be accomplished by, but not limited to: planning construction to avoid the resource; incorporating sites within parks, greenspace, or open space; covering the site with chemically stable soil prior to construction; or deeding the site into a permanent conservation easement, per State CEQA Guidelines Section 15126.4(b)(3)(A) – (B) and PRC Section 21083.2(b).</p> <p>4. Archaeological Data Recovery. If the District determines the site is a historical resource, preservation in place is not possible, and data</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>recovery is the only feasible mitigation, an archaeological Data Recovery Plan (DRP) will be designed to record and remove scientifically important data that would otherwise be destroyed through construction-related ground disturbance, per State CEQA Guidelines 15126.4(b)(3)(C). The DRP and data recovery fieldwork will be completed prior to the start of project construction. After the archaeological data recovery fieldwork is complete, the SOI-qualified archaeologist retained by the project proponent shall prepare an archaeological data recovery report (DRR). The report will conform with the California Office of Historic Preservation (OHP) recommended contents and format for cultural resources reports. The report shall be submitted to the District for review and, upon the District’s determination that the report is satisfactory, shall be deposited at the SCIC. Any artifacts collected during data recovery will be curated at the San Diego Archaeological Center, at the project proponent’s expense. Per State CEQA Guidelines Section 15126.4(b)(3)(D), if the District determines that testing or studies already completed have adequately recovered the scientifically important information from and about the archaeological or historical resource, data recovery will not be required, provided that the determination is documented and that the studies are deposited with the SCIC.</p> <p>5. Archaeological Construction Monitoring. In the event the District determines that archaeological construction monitoring is necessary in order to mitigate the potential for project construction to</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>impact as-yet unknown archaeological resources, then the project proponent shall retain an SOI-qualified archaeologist, approved by District. At its discretion, the District may require a Native American monitor also be present during ground-disturbing construction activities. During project-specific environmental review, the approved SOI-qualified archaeologist shall prepare and submit to the District for approval an Archaeological Monitoring and Discovery Plan (AMDP). The AMDP shall describe the project, archaeological sensitivity of and known archaeological resources in the project area, monitor qualifications, monitoring and discovery procedures, roles and responsibilities, and reporting. Upon completion of archaeological construction monitoring, a Final Monitoring Report (FMP) shall be prepared in conformance with the OHP’s guidelines for the preparation of cultural resources management reports and will be deposited at the SCIC. Any diagnostic artifacts collected during archaeological construction monitoring will be curated at the San Diego Archaeological Center, at the project proponent’s expense.</p> <p>6. Unanticipated Discovery Procedures. For those projects where there is the potential for encountering unknown archaeological resources, if an unanticipated discovery of an archaeological resource occurs during construction of a project, construction-related ground disturbance would be diverted or temporarily halted until the SOI-qualified archaeologist can assess if it is a historical resource or a unique archaeological resource. The</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-CUL-3: Future Ground-Disturbing Activities Within the Proposed PMPU Area May Adversely Impact Tribal Cultural Resources. Ground-disturbing activities associated with future development allowed under the proposed PMPU would have the potential to cause a substantial adverse change in the significance of a TCR, as defined in PRC Section 21074, which would be considered a significant impact.</p>	PS	<p>District, based on information provided by the SOI-qualified archaeologist, would determine the significance of the discovered resources in accordance with MM-CUL-2 and per PRC 21083.2(i) and State CEQA Guidelines Section 15064.5(f). Significance would be based on the results of evaluative archaeological testing completed by the SOI-qualified archaeologist and applying the criteria for listing in the CRHR, per State CEQA guidelines Section 15064.5(a)(1-4) and identifying unique archaeological resources per Section 21083.2 of the PRC. For cultural resources determined by the District to be a historical resource or a unique archaeological resource, the SOI-qualified archaeologist shall prepare a Research Design and Data Recovery Program (RDDR), which shall mitigate impacts in accordance with MM-CUL-2 and State CEQA Guidelines Section 15126.4(b)(3) and Section 15064.5(f), and the project proponent would be required to retain an SOI-qualified archaeologist for continuous archaeological monitoring until the completion of ground-disturbing construction activities in the vicinity of the unanticipated discovery.</p> <p>Implement MM-CUL-2, as described above.</p> <p>MM-CUL-3: Require Standard Mitigation Measures for Impacts on TCRs. If AB 52 tribal consultation occurs for a future development project under the proposed PMPU and a tribe and the District cannot come to an agreement on mitigation measures, PRC Section 21084.3 lists examples of standard mitigation measures that the District may require, when feasible, to mitigate impacts on TCRs:</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-C-CUL-1: Future Construction Activities Within the Proposed PMPU Area May Adversely Impact Current and Future Significant Historical Resources. Future construction activities consistent with the proposed PMPU would have the potential to:</p> <ol style="list-style-type: none"> 1. Demolish a historical resource. 2. Alter a historical resource such that it no longer retains sufficient historical integrity to convey significance. 3. Alter the setting of a historical resource for which the setting is in important character-defining feature that expresses the resource’s significance. 	PS	Implement MM-CUL-1 , as described above.	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Any one of these outcomes would be considered a significant impact on a historical resource.			
<p>Impact-C-CUL-2: Future Ground-Disturbing Activities Within the Proposed PMPU Area May Adversely Impact Archaeological Resources that are Historical Resources or Unique Archaeological Resources. Ground-disturbing activities associated with future development allowed under the proposed PMPU would have the potential to damage or destroy archaeological resources that are historical resources (as defined in State CEQA Guidelines Section 15064.5(a)) or qualify as a unique archaeological resource (as defined in PRC Section 20183.2(g)), which would be considered a significant impact.</p>	PS	Implement MM-CUL-2 , as described above.	SU
<p>Impact-CUL-3: Future Ground-Disturbing Activities Within the Proposed PMPU Area May Adversely Impact Tribal Cultural Resources. Ground-disturbing activities associated with future development allowed under the proposed PMPU would have the potential to cause a substantial adverse change in the significance of a TCR, as defined in PRC Section 21074, which would be considered a significant impact.</p>	PS	Implement MM-CUL-2 and MM-CUI-3 , as described above.	SU
4.5 Geology			
Project Impacts			
<p>Impact-GEO-1: Future Construction Activities Within PD1, PD3, PD8, PD9, and PD10 May Adversely Impact Unique Paleontological Resources. Planning Districts 1, 3, 8, 9 and 10 contain areas with the Bay Point Formation, which is known to contain sensitive paleontological resources and is assigned a high paleontological sensitivity. Ground disturbance of more than 1,000 cubic yards at a depth of 10 feet or greater within these locations from future construction activities allowed under the proposed PMPU would have the potential to result in a</p>	PS	<p>MM-GEO-1: Require Paleontological Sensitivity Screening and Monitoring in Areas of Sensitivity. Future development allowed under the proposed PMPU shall be subject to paleontological and geologic resource sensitivity screening as part of the application process for District approval. The paleontological resource sensitivity screening shall examine whether the proposed development would include ground disturbance with the potential to encounter undisturbed soils and whether the development is</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>significant impact on unique paleontological resources or sites.</p>		<p>located on a site (or sites) underlain by Bay Point Formation, and meets one or more of the following conditions: (1) construction would involve ground disturbance of a fossil recovery site or within 100 feet of a mapped fossil recovery site, or (2) construction would require over 1,000 cubic yards of excavation and depth of excavation exceeding 10 feet. If the proposed development meets either or both of the above-stated criteria, the project proponent shall retain a Qualified Paleontologist, approved by the District, who shall conduct paleontological monitoring during all ground-disturbing activities. The paleontological monitoring required by this mitigation measure shall include the following measures:</p> <ul style="list-style-type: none"> • The project proponent shall retain a Qualified Paleontologist, approved by the District. A “Qualified Paleontologist” shall be defined as an individual (i) who has a M.S. or Ph.D. in paleontology, or geology, (ii) who also has demonstrated familiarity with paleontological procedures and techniques, (iii) who is knowledgeable in the geology and paleontology of San Diego County, and (iv) who has worked as a paleontological mitigation project supervisor in the County of San Diego for at least 1 year. • The Qualified Paleontologist shall attend the preconstruction meeting(s) to consult with the grading and excavation contractors or subcontractors concerning excavation schedules, paleontological field techniques, and safety issues. • The Qualified Paleontologist or Paleontological Monitor shall be on site, on a full-time basis, during ground-disturbing activities that occur 10 feet or more below ground surface, to inspect exposures for contained fossils. The Paleontological Monitor shall work under the direction of the project’s Qualified Paleontologist. A “Paleontological Monitor” shall be 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-C-GEO-1: Future Construction Activities Within PD1, PD3, PD8, PD9, and PD10 May Adversely Impact Unique Paleontological Resources. Planning Districts 1, 3, 8, 9 and 10 contain areas with the Bay Point Formation, which is known to contain sensitive paleontological resources and is assigned a high paleontological sensitivity. Ground disturbance of more than 1,000 cubic</p>	PS	Implement MM-GEO-1 , as described above.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
yards at a depth of 10 feet or greater within these locations from future construction activities allowed under the proposed PMPU would have the potential to result in a significant impact on unique paleontological resources or sites.			
4.6 Greenhouse Gas Emissions			
Project Impacts			
Impact-GHG-1: Inconsistency with the Statewide Reduction Target for 2030 (Project-Adjusted) and Goal for 2050. Proposed PMPU buildout emissions would be inconsistent with the statewide reduction 2030 target and 2050 goal. Therefore, the contribution of PMPU-related GHG emissions is considered significant.	PS	Implement MM-AQ-2 , MM-AQ-3 , and MM-AQ-6 through MM-AQ-12 , as described above in Section 4.2, <i>Air Quality and Health Risk</i> . Implement MM-TRA-1 through MM-TRA-3 , as described in Section 4.14, <i>Transportation, Circulation, and Mobility</i> below. MM-GHG-1: Secure All Electricity from Renewable Sources. Prior to the District’s approval of any future development project under the proposed PMPU, the project proponent shall ensure that all electricity obtained is provided by renewable sources by 2030. Tenants shall submit evidence of compliance with this requirement annually to the District’s Development Services Department. This can be met by purchasing and installing renewable energy systems, power purchase agreements, by opting into carbon-free electricity through an offsite providers, such as Direct Access. MM-GHG-2. Purchase Alternative Fuel, Electric, or Hybrid Vehicles and Equipment. The District shall replace all fossil-fueled on-road vehicles in its fleet with zero-emission vehicles by 2030. For specialized equipment where zero-emission vehicles are not available, the District shall replace all on-road vehicles in its fleet with the lowest emitting option available.	SU
Impact-GHG-2: Conflict with Plans, Policies, and Regulations Adopted to Reduce GHG Emissions. Project emissions, before mitigation, would be inconsistent with	PS	Implement MM-AQ-2 and MM-AQ-3 , and MM-AQ-6 through MM-AQ-12 , as described above. Implement MM-TRA-1 through MM-TRA-3 , as described in Section 4.14 <i>Transportation, Circulation, and Mobility</i> below.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
plans, policies, and regulations adopted to reduce GHG emissions.		Implement MM-GHG-1 and MM-GHG-2 , as described above.	
Impact-EN-1: Potential Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources. Implementation of the proposed PMPU would have the potential to result in the wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation.	PS	Implement MM-AQ-2 , MM-AQ-3 , MM-AQ-6 , and MM-AQ-9 through MM-AQ-12 , as described above. Implement MM-GHG-1 and MM-GHG-2 , as described above. Implement MM-TRA-3 , as described in Section 4.14 below.	LTS
Impact-EN-2: Potential Inconsistency with Applicable Energy Use Reduction Plans. The proposed PMPU would be consistent with statewide renewable energy or energy efficiency plans and regulations, but would not be consistent with local plans, such as the District's CAP, prior to mitigation. This would be considered a significant impact prior to mitigation.	PS	Implement MM-AQ-9 , MM-AQ-10 , MM-AQ-11 , and MM-AQ-12 , as described above. Implement MM-GHG-2 , as described above.	LTS
Impact-C-GHG-1: Inconsistency with the Statewide Reduction Targets for 2030 and 2050. Proposed PMPU buildout emissions would be inconsistent with the statewide reduction 2030 target and 2050 goal. Therefore, the contribution of PMPU-related GHG emissions is considered significant.	PS	Implement MM-AQ-2 and MM-AQ-3 , and MM-AQ-6 through MM-AQ-12 , as described above. Implement MM-GHG-1 and MM-GHG-2 , as described above.	LTS
Impact-C-GHG-2: Conflict with Plans, Policies, and Regulations. Project emissions, before mitigation, would be inconsistent with plans, policies, and regulations adopted to reduce GHG emissions.	PS	Implement MM-AQ-2 , MM-AQ-3 , and MM-AQ-6 through MM-AQ-12 , as described above. Implement MM-GHG-1 and MM-GHG-2 , as described above.	SU
Impact-C-EN-1: Potential Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources. Implementation of the proposed PMPU would have the potential to result in the wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation.	PS	Implement MM-AQ-2 , MM-AQ-3 , MM-AQ-6 , MM-AQ-9 , MM-AQ-10 , and MM-AQ-12 , as described above. Implement MM-GHG-1 and MM-GHG-2 , as described above.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-C-EN-2: Potential Inconsistency with Applicable Energy Use Reduction Plans. The proposed PMPU would be consistent with statewide renewable energy or energy efficiency plans and regulations, but would not be consistent with local plans, such as the District’s CAP, prior to mitigation. This would be considered a significant impact prior to mitigation.</p>	PS	<p>Implement MM-AQ-9 through MM-AQ-12, as described above. Implement MM-GHG-2, as described above.</p>	LTS
<p>4.7 Hazards and Hazardous Materials</p>			
<p>Project Impacts</p>			
<p>Impact-HAZ-1: Possible Onsite Contamination. Environmental database searches indicate properties with historic and ongoing investigation and remediation of contaminated soil, groundwater, and/or sediment may be encountered during construction activities in certain areas of PD1, PD2, PD3, and PD4. Construction activities with soil, sediment, or groundwater disturbance within 300 feet of a known open case or documented contaminant plume, or 150 feet from a closed case, either listed in the HMTS or documented since on a hazardous materials database, would potentially result in the accidental upset or release of hazardous materials and create a potentially significant hazard to workers, the public, and the environment. Impacts are therefore considered significant.</p>	PS	<p>MM-HAZ-1: Conduct an Environmental Site Assessment, Prepare a Remediation Plan, and Remediate Accordingly. This mitigation measure applies to future development that includes ground-disturbing activities and are located within 300 feet of a known open hazardous materials case or documented contaminant plume, or 150 feet from a closed case. During the preparation of a site-specific environmental review and before the District approves the future development project, the project proponent shall retain a licensed, qualified, and experienced Environmental Professional, approved by the District, who shall conduct or directly oversee the preparation and implementation of the site assessment and remediation plans specified below. The Environmental Professional shall be a California-licensed Professional Geologist or Professional Engineer with more than 3 years of experience conducting hazardous materials environmental assessments, consistent with the definition of an environmental professional according to ASTM E1527-13 (Standard Practice for ESAs: Phase I ESA Process). For A.1. below, qualified District staff, with at least 3 years of experience interpreting and conducting hazardous materials desktop investigations consisting of environmental database searches, historical site use archival research, and environmental</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>review of available aerial and site photography, may conduct the Desktop Investigation. Environmental site assessments, including the preparation of testing and remediation plans, shall include one or more of the following steps. Every assessment type mentioned below may not be required for each future development project, depending on onsite conditions and proposed elements of the development projects. The District shall determine which of the following site assessment and/or plans will be required for a future development project.</p> <p>A. Steps for Land Disturbance Activities</p> <ul style="list-style-type: none"> Desktop Investigation. The project proponent shall either submit to the District for review and approval, or the District shall prepare, a desktop-based investigation (e.g., hazardous materials technical study, hazardous materials database review, or review of other similar reference documents) to evaluate the likelihood of contaminated soils, sediments, and/or groundwater to be present within or adjacent to the future project site, due to historic uses on or near the project site, or past or present investigations or remediations that have occurred on adjacent or nearby properties that have the potential to affect development on the project site. The desktop investigation shall be performed by an Environmental Professional and reviewed and approved by the District or may be performed by qualified District staff with at least 3 years of experience interpreting and conducting hazardous materials desktop investigations consisting of database searches, historical site use archival research, and review of available aerial and site photography. The investigation shall consider the potential presence of structures or former structures on the site built prior to 1980, and shall determine if 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>a potential for lead and organochlorine pesticides may be present in the soil at the project site due to proximity to a structure built prior to 1980. The desktop investigation shall include, at a minimum, a summary of the history of the project site, the current conditions on the project site, and a review of available documentation regarding previous evaluation(s) of the site. The desktop review shall take into account the site conditions and features of the project, including the location, depth, and quantity of soil disturbance resulting from construction of the project, the historic uses and former or existing buildings on the project site, the presence of former or current monitoring or investigation on the project site, past abatement and/or remediation of contaminants at the project site, whether the site has been previously graded, and the condition of existing site facilities on the project site. If the results of the desktop investigation indicate the potential for contamination to exist on site or adjacent to the site, further investigation and site planning would be required, and the project proponent shall perform one or more of the following steps, as determined by the District.</p> <ul style="list-style-type: none"> • Prepare Phase I ESA. The Environmental Professional, shall, at the project proponent's expense, prepare a Phase I ESA in accordance with the standard of care at that time (currently the ASTM Standard Practice E1527-13) and applicable regulations (currently the EPA's "Standards and Practices for All Appropriate Inquiries [40 CFR 312]") and submit the Phase I ESA to the District for its review and approval. • Prepare Phase II ESA. In the event the findings of the Phase I ESA recommend further evaluation through a Phase II ESA, the Environmental 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>Professional, shall, at the project proponent’s expense, prepare a Phase II ESA to adequately evaluate the project area for the presence of contaminants of potential concern (COPCs), as indicated by the Phase I ESA. Sites with cases under regulatory oversight shall coordinate with the appropriate oversight agency (e.g., SWRCB, DTSC, USACE, or other) and the District prior to commencement of the Phase II ESA. The Environmental Professional shall prepare a Phase II work plan, which shall describe sampling and testing methodology that shall be followed while conducting the Phase II ESA. The Phase II work plan shall be submitted to and reviewed and approved by the oversight agency and/or the District. The Phase II ESA shall also include a review of any available existing documentation of previous ESAs, UST removal sampling data, remediation, or other assessments of the project site. Results of previous assessments and results of onsite testing shall be reported in the Phase II ESA, which shall be submitted to the District and oversight agency (if applicable) for review and approval.</p> <ul style="list-style-type: none"> Prepare Soil and/or Groundwater Management Plan. The project proponent for future development of impacted or potentially impacted properties (as determined by the Phase I and II ESAs) involving ground-disturbing activities, such as, but not limited to, soil excavation, demolition, grading, or other subsurface disturbance, shall be required to prepare and implement a Soil and/or Groundwater Management Plan (Management Plan) that addresses soil and groundwater (as applicable). The plan shall be prepared by the Environmental Professional, and be implemented during ground-disturbing activities under the oversight of the Environmental 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>Professional. The plan, at a minimum, shall address (1) monitoring of excavated soil or other ground-disturbing activities; (2) community and worker health and safety; (3) soil and groundwater handling, stockpiling, characterization, onsite reuse, export, and disposal protocols; (4) permitting; (5) notifications; (6) contingency plans for encountering unanticipated contamination; and (7) reporting. Appropriate references of the potential to encounter contaminated soils and/or groundwater shall be included in construction specifications and bid documents so various environmental factors (e.g., construction dewatering, soil disposal) and worker and community health and safety are appropriately and cost-effectively planned for and managed by the contractor. The Management Plan shall be submitted to the District for review and approval during the project’s site-specific environmental review. After the District’s review and approval, the project proponent shall implement the Management Plan as a condition of approval of the project.</p> <p>a. When Dewatering is Proposed/Required. When dewatering is proposed/required during construction that may generate contaminated groundwater, the Management Plan shall include additional measures applicable to dewatering activities. If dewatering is expected during construction, the project proponent shall obtain a NPDES permit from the RWQCB, or <i>Discharge Permit</i> or a <i>Batch Discharge Authorization</i> from the Cities of Coronado, Imperial Beach, or San Diego prior to commencing construction activities. The project proponent shall comply with the requirements of the discharge permit; and if the discharge water is contaminated, these requirements may include characterization of the</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>water to be discharged and pretreatment of groundwater prior to discharge. The project proponent shall coordinate with the RWQCB and any other agency providing oversight of wastewater discharge for the project site, to ensure consistency between all applicable requirements for discharge pertaining to the property (i.e., existing NPDES permit, etc.). All requirements and measures regarding the dewatering process shall be included in the Management Plan. The Management Plan shall be submitted for the District’s review and approval. After the District has reviewed and approved the Management Plan, it shall be implemented by the project proponent as a condition of approval of the project.</p> <p>b. Prepare Site Health and Safety Plan. The Management Plan shall include a Site Health and Safety Plan to reduce potential health and safety hazards to workers and the public. The Site Health and Safety Plan shall require compliance with 29 CFR Part 120, Hazardous Waste Operations and Emergency Response regulations for site workers at uncontrolled hazardous waste sites. The Site Health and Safety Plan shall be based on the due diligence completed for the site (Phase I ESA and Phase II ESA) and the planned site construction activity to ensure that site workers potentially exposed to site contamination in soil and groundwater have the proper training, equipment, and hazard monitoring action levels during site activity. The Site Health and Safety Plan shall be submitted to the District for review and approval during the project’s environmental review and implemented under the oversight of a Certified Industrial Hygienist, retained by the project</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>proponent as a mitigation measure and/or condition of approval of the project. The project proponent along with its contractors shall implement the training, equipment, and monitoring activities outlined in the Health and Safety Plan to ensure that workers are not exposed to contaminants above permissible exposure limits established by Table Z, 29 CFR Part 1910.1000.</p>	
		<p>B. Steps for Bay Sediment Disturbance Due Diligence</p> <p>1. Prepare Sediment Management Plan. The project proponent for future development of impacted or potentially impacted properties (as determined by the Phase I and II ESAs) involving sediment-disturbing activities, such as, but not limited to, dredging, excavation, pile removal, pile installation, or other subsurface disturbance, shall be required to obtain and implement a management plan that addresses sediment (“Sediment Management Plan”). The Sediment Management Plan shall be prepared by a California-licensed Professional Geologist, Professional Engineering Geologist, or Professional Engineer, retained by the project proponent. The Sediment Management Plan, at a minimum, shall address (1) monitoring of dredging, excavation, or other sediment-disturbing activities; (2) community and worker health and safety; and (3) sediment handling, stockpiling, characterization, onsite reuse, export, and disposal protocols. The Sediment Management Plan shall describe in detail the methods to be employed to minimize disturbance of contaminated sediment during waterside construction activities and the monitoring that will occur during construction activities. Appropriate references to the potential to encounter</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-HAZ-2: Potential to Encounter Undocumented Contamination During Reasonably Foreseeable Construction Activities. Due to the historic uses within and adjacent to the proposed PMPU area, it is possible previously undiscovered contaminated soil, groundwater, and/or sediment may be present. Ground-disturbing activities at these sites could result in the accidental exposure of hazardous materials to workers, or the accidental release or spill of hazardous materials to the environment. Therefore, disturbance of undocumented contamination would have the potential to result in reasonably foreseeable upset and accidental conditions involving the release of hazardous materials to the environment. Impacts are therefore considered significant.</p>	PS	<p>contaminated sediment shall be included in construction specifications and bid documents so that the contractor can ensure various environmental factors (e.g., sediment disposal) are appropriately and cost-effectively managed by the contractor. The Sediment Management Plan shall be submitted to the District for review and approval. After the District’s review and approval, the project proponent shall implement the Sediment Management Plan as a condition of approval of the project.</p> <p>Implement MM-HAZ-1, as described above.</p> <p>MM-HAZ-2: Identify Unknown Hazardous Materials Encountered During Construction. If, during ground-disturbing construction activities, the project proponent or its contractors encounter indications of potential contamination, including but not limited to discoloration of the soil, a sheen on the surface of groundwater, or an odor, the project proponent or contractor shall halt work in the vicinity of the potential contamination. Before the project proponent resumes work, the project proponent shall retain an Environmental Professional, approved by the District, to characterize the potential contamination. If the Environmental Professional determines that the potential contamination is a hazardous material, the Environmental Professional shall prepare a Management Plan and a Health and Safety Plan (as described in MM-HAZ-1) for the project site. The project proponent shall submit the Management Plan and the Health and Safety Plan to the District for review and approval. The project proponent shall implement the approved Management Plan and Health and Safety Plan prior to and throughout the remainder of construction activities. Additionally, if the substance encountered is determined to be a hazardous material,</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-HAZ-3: Potential to Encounter Lead or Organochlorine Pesticides in Soil During Reasonably Foreseeable Construction Activities. Concentrations of lead in the soil may be above acceptable levels at sites either containing or formerly containing structures built prior to 1980 as a result of lead used in building materials or paint that may have leached from the structure into the soils. In addition, organochlorine pesticides, often used historically as termiticides for wooden structures, may be present in the soil surrounding existing or former structures. Impacts are therefore considered significant.</p>	PS	<p>the project proponent shall notify the County DEH, and shall comply with any additional requirements of the County DEH.</p> <p>Implement MM-HAZ-1 and MM-HAZ-2, as described above.</p>	LTS
<p>Impact-HAZ-4: Potential to Encounter Contamination On Site Due to Listing on a Hazardous Materials Database. Future development allowed under the PMPU that includes ground- or sediment-disturbing activities could encounter contaminated soil, groundwater, and/or sediment related to sites listed on a hazardous materials site database pursuant to Government Code Section 65962.5. Impacts would be significant.</p>	PS	<p>Implement MM-HAZ-1 and MM-HAZ-2, as described above.</p>	LTS
<p>Impact-C-HAZ-1: Possible Onsite Contamination. Environmental database searches indicate properties with historic and ongoing investigation and remediation of contaminated soil, groundwater, and/or sediment may be encountered during construction activities in certain areas of PD1, PD2, PD3, and PD4. Construction activities with soil, sediment, or groundwater disturbance within 300 feet of a known open case or documented contaminant plume, or 150 feet from a closed case, either listed in the HMTS or documented since on a hazardous materials database, would potentially result in the accidental upset or release of hazardous materials and create a potentially significant</p>	PS	<p>Implement MM-HAZ-1, as described above.</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>hazard to workers, the public, and the environment. Impacts are therefore considered significant.</p>			
<p>Impact-C-HAZ-2: Potential to Encounter Undocumented Contamination During Reasonably Foreseeable Construction Activities. Due to the historic uses within and adjacent to the proposed PMPU area, it is possible previously undiscovered contaminated soil, groundwater, and/or sediment may be present. Ground-disturbing activities at these sites could result in the accidental exposure of hazardous materials to workers, or the accidental release or spill of hazardous materials to the environment. Therefore, disturbance of undocumented contamination would have the potential to result in reasonably foreseeable upset and accidental conditions involving the release of hazardous materials to the environment. Impacts are therefore considered significant.</p>	PS	Implement MM-HAZ-1 and MM-HAZ-2 , as described above.	LTS
<p>Impact-C-HAZ-3: Potential to Encounter Lead or Organochlorine Pesticides in Soil During Reasonably Foreseeable Construction Activities. Concentrations of lead in the soil may be above acceptable levels at sites either containing or formerly containing structures built prior to 1980 as a result of lead used in building materials or paint that may have leached from the structure into the soils. In addition, organochlorine pesticides, often used historically as termiticides for wooden structures, may be present in the soil surrounding existing or former structures. Impacts are therefore considered significant.</p>	PS	Implement MM-HAZ-1 and MM-HAZ-2 , as described above.	LTS
<p>Impact-C-HAZ-4: Potential to Encounter Contamination On Site Due to Listing on a Hazardous Materials Database. Future development allowed under the PMPU that includes ground- or sediment-disturbing activities could encounter contaminated soil, groundwater, and/or sediment related to sites listed on a hazardous materials site database pursuant to Government Code Section 65962.5. Impacts would be significant.</p>	PS	Implement MM-HAZ-1 and MM-HAZ-2 , as described above.	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.8 Hydrology and Water Quality			
Project Impacts			
<p>Impact-WQ-1: Disturbance of Contaminated Sediment During Construction. Contaminated sediments are present in PD1, PD2, PD3, and PD4. In-water construction activities within these areas have the potential to disturb contaminated sediments, which could be released back into the water column and resuspended, resulting in the spread of the contaminants. Dredging of contaminated sediment could also degrade water quality by resuspending contaminated sediments and releasing constituents of concern. In addition, constituents of concern could be released when sediments are suspended in the water column. Resuspended contaminants may dissolve into the water column and become available for uptake by biota. Redeposition may occur near the dredge or construction areas, or, depending on the environmental conditions and controls, resuspended sediment may be transported to other nearby locations in the water body. Resuspension of contaminated sediments and release of constituents of concern could impact water quality by increasing contaminant levels to levels toxic to aquatic receptors. Lastly, the removal of creosote piles could result in resuspension of sediments contaminated with PAHs.</p>	PS	<p>MM-WQ-1: Monitor Turbidity and Constituents of Concern During Construction-Related Sediment Disturbance. Prior to the approval of a future development project that would occur in an area with known or suspected contaminated sediments and would involve in-water construction activities that could disturb sediment (e.g., dredging, pile removal or installation, or other in-water construction-related activities that will disturb Bay floor sediment), the project proponent shall retain a water quality monitor, approved by the District, who shall prepare a water quality monitoring plan and shall conduct water quality monitoring to demonstrate to the satisfaction of the District and the RWQCB that construction activities do not violate the Basin Plan or project-specific water quality objectives. Approval of the plan by the District and appropriate regulatory agencies is required before field activities can be initiated. The plan shall incorporate: (1) all permit-specific regulatory monitoring and reporting requirements and (2) a detailed description of the proposed water quality monitoring program. The plan will clearly identify the project boundaries, and chemical constituents of concern and water quality thresholds; and provide a detailed description of the water quality monitoring to be conducted prior to, during, and after construction activities to ensure compliance with this mitigation measure. The monitoring plan will be robust enough to ensure that any exceedances of water quality objectives are identified. Depending upon the scope of the project and the potential for the release of project-derived contaminants, the water quality monitoring shall include visual inspections of turbidity and debris as</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>well as water-column monitoring using appropriate and calibrated water quality monitoring field equipment to measure, at a minimum: turbidity, dissolved oxygen, pH, temperature, and salinity. The District, in consultation with the RWQCB and other resource agencies (as applicable), shall determine the types of constituents to be monitored, and appropriate water quality thresholds and standards for the project (e.g., San Diego Basin Plan, California Toxics Rule, applicable TMDLs, and/or other site-specific considerations). If water column monitoring indicates exceedances of water quality thresholds (e.g., turbidity or dissolved oxygen), then water column samples shall be collected and analyzed for project-specific chemicals of concern. The project proponent shall use a State of California Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for all analytical testing.</p> <p>The designated water quality monitor shall stop work to ensure that turbidity does not extend outside of the immediate construction area. If turbidity is 20 percent higher outside the work area versus inside the work area, the water quality monitor may direct the temporary halt of construction activities. The District shall direct the project proponent to implement additional control measures necessary to protect water quality per CWA Section 401 and 404 permits, the San Diego Basin Plan, and the project-specific permits. Depending upon the requirements in the permit, the project proponent and/or District may be required to alert the regulatory agencies if a water quality violation is observed. In addition, the project proponent shall coordinate water quality monitoring efforts and shall provide copies of all monthly water quality monitoring data to the RWQCB and District throughout the duration of project construction, as outlined in the</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>reporting schedule of the agency-approved monitoring plan or project-specific permits.</p> <p>MM-WQ-2: Implement Best Management Practices During Construction-Related Sediment Disturbance. Prior to the approval of a future development project that involves dredging, pile removal (especially the removal of creosote-treated piles), pile installation, and other construction-related activities that may disturb Bay floor sediment within areas of known or suspected sediment contamination, the District shall identify BMPs necessary for minimizing resuspension, spillage, and misplaced sediment during construction activities, as the deposition of such material would increase turbidity and degrade water quality. BMPs shall be implemented by the project proponent and shall include, but shall not be limited to, the following:</p> <ul style="list-style-type: none"> • The project proponent shall not stockpile material on the bottom of the San Diego Bay floor and shall not sweep or level the bottom surface with the bucket. • The project proponent shall use and maintain silt curtains for dredging operations that encircle the area of construction activities and shall minimize the times in which these curtains are temporarily opened (allowing only necessary openings for operation of the curtain), to contain suspended sediments, as more specifically described in MM-WQ-3. • Based on a determination of the District and applicable Federal and/or State permitting agency (as applicable), air curtains in conjunction with silt curtains may be used to contain resuspended sediment, and allow barges containing dredge material or empty barges to transit into and out of the work area without the need to open and close silt curtain gates. 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<ul style="list-style-type: none"> ● <i>In-Water Activity–Specific Procedures (Pile Installation or Removal)</i>. The project proponent shall conduct pile installation or removal in a manner that implements applicable permit requirements, including the CWA Section 404 permit and CWA Section 401 Water Quality Certification. The following additional measures shall be required based on the type of pile installation, or removal, that occurs. <ul style="list-style-type: none"> ○ Impact Hammer Pile Driving or Jetting. Turbidity curtains shall be installed for District projects or non-District projects by the proponent consistent with the District’s Best Management Practices and Environmental Standards for Overwater Structural Repair and Maintenance Activities for Existing Port Facilities Conducted by the San Diego Unified Port District (District 2019). ○ Spudding. Spuds lifted during in-water construction shall be lifted slowly—at least a quarter of the speed that spuds are lifted during normal operation. Before the spud reaches the subsurface of the Bay floor during removal, the operator shall conduct spud extraction in 2-minute intervals (repeated 2-minute extraction followed by 2-minute pause) to reduce the disturbance of Bay sediment. 	
		<p>MM-WQ-3: Apply Silt Curtains During Construction-Related Sediment Disturbance with Contaminants of Concern. Each future development project that involves dredging, pile installation, and other construction-related activities that will disturb Bay floor sediment within areas of known or suspected sediment contamination, shall utilize silt curtains for containment of the contaminants of concern. Prior to the District’s approval of each future project, the project proponent shall provide details about the silt curtain installation, curtain configurations, technologies, and</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>actual locations to the District for its review and approval. During dredging activities where contaminated sediment conditions are present (based on the results of MM-WQ-1 or based on other recent available evidence), the project proponent shall deploy inner- and outer-boundary floating silt curtains that enclose the construction area. The floating silt curtain shall consist of connected lengths of fabric. A continuous length of floating silt curtain shall be arranged to fully surround the construction equipment. The silt curtain shall be supported by a floating boom in open water areas (such as along the bayward side of the dredging areas). Along pier edges, the project proponent shall have the option of connecting the silt curtain directly to the structure. The project proponent shall continuously monitor the silt curtain for damage, dislocation, or gaps and immediately fix any locations where it is no longer continuous or where it has loosened from its supports. The bottom of the silt curtain shall be weighted with ballast weights or rods affixed to the base of the fabric that do not touch the Bay floor at the lowest tide even with curtain float/swing. Where the District determines it is feasible and applicable, the floating silt curtains shall be anchored and deployed from the surface of the water to just above the substrate allowing for tidal action. If deemed necessary by the District once project construction details and plans are available, silt curtains with tidal flaps shall be installed to facilitate curtain deployment in areas of higher flow. Based on a determination by the District and the Federal and/or State permitting agencies (as applicable), air curtains may be used in conjunction with silt curtains to contain resuspended sediment and allow barges containing dredge material or empty barges to transit into and out</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>of the work area, without the need to open and close silt curtains.</p> <p>MM-WQ-4: Implement a Dredging Management Program. Prior to the District’s approval of a future development that involves dredging in known or suspected areas with sediment contamination, excluding maintenance dredging with low level constituents of concern (COCs) that would allow for beneficial reuse or other unconfined aquatic disposal options as approved by the EPA and USACE, the project proponent shall prepare and submit to the District for review and approval a Dredging Management Program (DMP) that complies with applicable permit requirements, including the CWA Section 404 permit and CWA Section 401 Water Quality Certification. The DMP shall be implemented by the project proponent prior to, during, and upon completion of dredging activities. The DMP shall contain the following elements, each of which have specific timing mechanisms as identified in the description of each element below:</p> <p>A. <i>Dredging Operations Plan.</i> The project proponent shall develop a Dredging Operations Plan that identifies the standard operating procedures (SOPs) that will be implemented during dredging activities. The Dredging Operations Plan shall include step-by-step procedures to complete dredging operations safely, in an efficient manner, and to avoid releases of hazardous materials into the environment (i.e., from the resuspension of contaminated sediments as well as contaminants associated with construction activities such as oil or other equipment-related hazardous materials). The SOPs</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>shall include guidance with respect to, among other things, the following:</p> <ul style="list-style-type: none"> • Proper operation of the dredge bucket. • Proper positioning of the barge vessel to minimize propeller wash. • Placement and maintenance of double silt curtains. • Proper operation and maintenance of all construction equipment. <p>In addition, the Dredging Operations Plan shall identify sediment control BMPs to be implemented during dredging activities. The project proponent, or their contractor, shall at a minimum, implement the following BMPs for the safe handling of dredged material:</p> <ul style="list-style-type: none"> • Sediment Unloading. During dredging activities, the contractor shall reduce water column impacts by controlling the swing radius of the unloading equipment, using a spillage plate, and using a power wash unit to reduce impacts related to spillage from the excavator arm onto transport vehicles. • Filling Transport Vehicles. During dredging activities, the contractor shall ensure that truck volumes are limited to 90 percent based on visual observations, and that trucks shall be covered and secured per California Department of Transportation (Caltrans) regulations during transport to the disposal facility. • Sediment Loading. During dredging activities, the contractor shall ensure that trucks are loaded within a constructed loading zone to confine sediment spilled during the loading process. <p>B. <i>Contingency Plan.</i> The project proponent shall develop a Contingency Plan, which shall be</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>implemented in the case of equipment or operational failures, such as, but not limited to, silt curtain damage, spillage of sediment resulting from overloading the material barge, contact with sediment on or around the materials barge during loading, equipment failure of bucket or shear pin during loading procedures, or material barge or tugboat collision with another vessel. The Contingency Plan shall contain step-by-step procedures for response to equipment or operational failures and shall reduce the potential for the release of sediments to the water column outside the silt curtains.</p> <p>C. <i>Health and Safety Plan for Dredging Activities.</i> The project proponent shall prepare a Health and Safety Plan for Dredging Activities (Health and Safety Plan) and shall implement the Health and Safety Plan for the duration of the dredging activity. The Health and Safety Plan shall be prepared in general accordance with Federal Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) and California Code of Regulations, Title 8, Section 5192. The Health and Safety Plan shall provide procedures for workers for safe operation, personal protection, and emergency response during dredging operations.</p> <p>D. <i>Communication Plan.</i> The project proponent shall prepare a Communication Plan and operation guidelines for communications between the U.S. Coast Guard and Harbor Police and all vessel operators to ensure the safe movement of project</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>vessels from the dredge site to the unloading area. The contractor shall implement the Communication Plan throughout the duration of dredging activities.</p> <p>MM-WQ-5: Implement a Sediment Management Program. Prior to the District’s approval of any future development involving dredging within an area of known or suspected sediment contamination, the project proponent shall prepare a Sediment Management Program to be implemented prior to and throughout the duration of waterside construction activities. The Sediment Management Program shall be implemented in accordance with CWA Section 401 and 404 requirements, at a minimum, as well as other project-specific mitigation measures or enhanced BMPs. This will include the following elements, each of which have specific timing mechanisms, as identified in the description of each element below:</p> <ul style="list-style-type: none"> A. <i>Sampling and Analysis Plan (SAP)</i> B. Contaminated Sediment Management Plan (if contamination is found during implementation of the SAP) C. <i>Post-Construction Sampling and Analysis</i> <p>Sampling and Analysis Plan (SAP) Preparation and Implementation. The SAP shall be approved by the USACE/EPA using USACE/EPA guidance documents for sediment testing based on either the “green book” or “inland testing manual,” and shall determine and delineate the area of potential disturbance (Disturbance Area); implement the agency approved SAP; and compile the findings of the sediment testing program in a Sediment Characterization Report for submittal to the District and regulatory agencies. The SAP shall include project-specific details identified in regulatory guidance and shall set forth the methodology to be used, the locations where sampling would occur, analysis of the</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>constituents of concern, and proper decontamination and disposal procedures. The sediment samples shall be tested for the presence of the COCs. The sampling area and sampling methodology shall identify sample locations determined to be appropriate delineating the vertical and lateral extent and concentration of the project site’s potential COCs, at the discretion of the USACE, EPA, and RWQCB (or other applicable agencies), in concurrence with the District to adequately characterize any Disturbance Area associated with dredging. The SAP must be submitted to the District for concurrence and the EPA and USACE for approval. Sediment sampling and analysis shall be performed in accordance with the requirements of the SAP to determine whether the sediment is contaminated. The results of all sediment sampling shall be documented in a Sediment Characterization Report and submitted to the District for concurrence and USACE, EPA, and RWQCB for their approval prior to any marine-side sediment-disturbing activities. The project shall be implemented in accordance with the regulatory permits and any project-specific conditions.</p> <p>Contaminated Sediment Management Plan (Sediment Management Plan). If contaminated sediment is identified based in sediment sampling, the project proponent shall prepare a Contaminated Sediment Management Plan, which shall be submitted to the District for concurrence and the appropriate regulatory agencies for approval. Once approved, the Contaminated Sediment Management Plan shall be implemented by the project proponent and be subject to oversight by the appropriate regulatory agencies, as well as the District. The Contaminated Sediment Management Plan shall describe in detail the methods to be employed to minimize disturbance of contaminated sediment during waterside construction</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>activities (as identified in the SAP) and the monitoring that will occur during construction activities.</p> <p>Post-Construction Sampling and Analysis. At the conclusion of construction activities within an area with known or suspected COCs (not including areas of maintenance dredging that have been determined suitable for beneficial reuse or other unconfined aquatic disposal options as approved by the EPA and USACE), the project proponent shall conduct post-construction sediment quality confirmation sampling. This sampling will be performed in the manner and to the extent determined by the EPA, USACE, and RWQCB to be necessary to adequately characterize potential residual contamination resulting from construction activities. The project proponent shall prepare, for submittal to the District for concurrence and approval by the EPA, USACE, and RWQCB, a Post-Construction Sampling Plan that shall outline the methodology to be used, the locations where sampling would occur, and the COCs to be analyzed.</p> <p>MM-WQ-6: Implement Post-Dredging Remediation. If, after the completion of any dredging activity in an area with COCs, consistent with the requirements of MM-WQ-4 and MM-WQ-5, post-dredge sediment quality confirmation sampling shows that concentrations of COCs exceed those set forth by the RWQCB or other regulatory agency with jurisdiction, the project proponent shall propose and conduct additional dredging consistent with levels prescribed by the RWQCB or other regulatory agency with jurisdiction, subject to approval by the RWQCB or other regulatory agency with jurisdiction, and concurrence by the District. The project proponent's remediation approaches may include, but are not limited to, additional dredging, placement of sand cover, or Enhanced Monitored Natural Recovery sand containing</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>active carbon. If additional dredging is required, the remediation shall be conducted with oversight from the appropriate local, State, and Federal regulatory agencies. In addition, documentation evidencing the remediation work and completion thereof shall be submitted by the project proponent to the District. The project proponent shall monitor the remediation for its effectiveness, consistent with the standards, schedules, and reporting requirements set forth by the RWQCB. A monitoring report shall be submitted by the project proponent to the District and the RWQCB for their review at a frequency determined appropriate by the RWQCB.</p> <p>If, after the completion of any dredging activity within a disturbance area, consistent with the requirements of MM-WQ-4 and MM-WQ-5, concentrations of COCs in the area of potential contamination do not exceed those levels set forth by the RWQCB, no further mitigation is required.</p> <p>MM-WQ-7: Remove and Dispose of Creosote Piles Properly. During extraction of creosote treated piles, if piles cannot be completely removed, the project proponent shall cut them at least 1 foot below the mud line. If treated piles are fully extracted or if they are cut below the mudline, the project proponent shall cap the holes or piles with appropriate material such as clean sand. The project proponent shall dispose of removed creosote-treated piles in a manner approved by the District and applicable agencies that precludes their further use. The methodology for removal of creosote-treated piles is the same as non-treated piles with the exception that should any pile cutting shall be hand-collected and/or screened from the water for disposal at an appropriate waste facility (for creosote-treated wood guidelines, please see NOAA Fisheries Guidelines [NOAA Fisheries SW 2009] and EPA's Ecological Risk</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-WQ-2: Contribution to Water Quality Impairments from Future Marina Operations. Operation of future development and redevelopment of marinas may impair water quality by increasing the chances of accidental discharge of gray water or black water directly into marine waters. In addition, pollutants potentially generated from boat maintenance without appropriate BMPs, in-water hull cleaning of copper-based anti-fouling paint, and accidental discharges of fuel and oil could negatively affect water quality. In addition, copper associated with anti-fouling hull paints has contributed to water quality impairments in San Diego Bay. The potential net increase in the number of vessel slips would potentially result in additional contributions to water quality impairments within the Bay.</p>	PS	<p>Assessment for Creosote [EPA 2008]). Creosote pile handling and disposal follows typical contaminated material methods with the manifest documented and the licensed landfill recorded (<i>Best Management Practices and Environmental Standards for Overwater Structural Repair and Maintenance Activities for Existing Port Facilities Conducted by the San Diego Unified Port District, 2019</i>).</p> <p>The piles must be cut into manageable lengths for transport and disposal by the project proponent in an approved upland location. Extracted piles and debris should be placed by the project proponent in a lined stockpile area or directly loaded into a transport container or vehicle. Appropriate landside discharge controls (i.e., stormwater BMPs, including the use of tarps, wattles, and/or berms) approved by the District shall be identified by the project proponent prior to pile removal and implemented to prevent runoff from leaving the stockpile and entering surface- or groundwater.</p> <p>MM-WQ-8: Prepare and Implement a Marina Best Management Practice Plan and Copper Reduction Measures. To reduce potential impacts on water quality, the project proponent shall prepare a Marina Best Management Practice Plan specifically identifying best management practices that will be used within the Marina to (1) minimize the pollutant load, including measures to prevent, eliminate, and/or otherwise effectively protect water quality of the Bay and (2) reduce inputs of total and dissolved copper resulting from increased berthing of boats. Best management practices would be designed to adhere with the water quality criteria defined in the Basin Plan. The Marina Best Management Practice Plan and copper reduction measures shall be reviewed and approved by the District prior to the District’s approval of a future</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>development involving new or expanded marina operations. The project proponent shall be responsible for implementation and maintenance of the Marina Best Management Practice Plan and copper reduction measures, which at a minimum, shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • Use of educational materials provided to boat owners and their crews by the project proponent, that specify types of activities that shall be avoided and types of BMPs that shall be implemented in order to protect water quality (e.g., no in-slip refueling). Recommendations to reduce oil leaks include conducting periodic maintenance of all fuel lines, hoses, and gaskets; putting an oil-absorbent pad in the bilge; and installing a filtration system to remove oil from bilge water. • Docking agreements containing specific use restrictions to prevent degradation of water quality, such as restricting boat repairs and cleaning operations within the marinas. These specific use restrictions shall be similar to the recommendations from the <i>San Diego Bay Boaters Guide</i> (District 2006) and the California State Parks Division of Boating and Waterways' and California Coastal Commission's Boating Clean and Green Program (California DBW 2017), both of which promote environmentally sound boating practices to marine business and boaters in California. • Provide information to marinas and boat owners to support copper reduction, including hull-cleaning BMPs that comply with the District's in-water hull 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>cleaning ordinance and other applicable laws and regulations (Ordinance No. 2681).²</p> <ul style="list-style-type: none"> • Implementation of an incentive structure within the docking agreements’ rent rates for occupants with non-copper hull paint boats. • Identification of copper-free zones within the innermost portions of the marina, or limitation of copper hull paint boats to only well-flushed zones of the marina. • Prohibition of hull bottom scraping and the use of toxic detergents to clean vessels topside, and no overwater repairs. • Limitations on in-slip hull cleaning (restrict or limit number of cleanings per year). <p>The project proponent shall include a baseline assessment of dissolved copper levels within the project footprint prior to construction. Baseline conditions shall be compared to the periodic monitoring (annually at a minimum) to assess increases in copper directly attributed to project operations. Dissolved copper levels shall be compared to Basin Plan and TMDL-specific water quality objectives.</p> <p>The project proponent shall submit a baseline monitoring report and periodic monitoring reports (annually at a minimum) to the District for its review. If at any time during monitoring the water quality equals or exceeds the Basin Plan water quality objectives, the District shall require an update to the project’s Marina Best Practice Management Plan to include additional BMPs to reduce copper attributed to the project and</p>	

² Ordinance No. 2681 terms and conditions addressing the use of best management practices for in-water hull cleaning state: “1. No Person shall perform In-Water Hull Cleaning without complying with Best Management Practices generally recognized by the industry as being effective and environmentally sound. 2. No Person shall perform In-Water Hull Cleaning that results in visible paint plume or cloud.”

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-WQ-3: Water Quality Degradation from Aquaculture Operations. Depending on the type of aquaculture being practiced and the methods used, water quality degradation, which could include turbidity caused during harvesting and other similar operations, as well as biological oxygen demand, may occur during operation of aquaculture facilities.</p>	PS	<p>bring the water quality back into compliance with the Basin Plan.</p> <p>MM-WQ-9: Conduct Water Quality Monitoring of Aquaculture Operations. Prior to the District’s approval of an aquaculture project, the project proponent shall (1) conduct a siting study to predict potential water quality impacts due to physical factors such as reduced flushing as well as any potential operational impacts, (2) develop an aquaculture water quality monitoring plan consistent with the requirements of the Shellfish Aquaculture Mitigation Plan, and (3) identify site-specific BMPs to be implemented during operation of the aquaculture facility to lessen or eliminate potential water quality impacts. The project proponent shall submit the siting study, monitoring plan, and BMPs to the District for review and approval. The siting study shall include physical site-specific characteristics that may influence the local waterbody (e.g., hydrodynamic conditions, nearby natural resources, potential impacts on navigation). The water quality monitoring plan shall include an existing conditions report, an outline of water quality monitoring parameters and objectives as issued by relevant permitting authorities and resource agencies. Throughout the duration of the project’s operations, the project proponent shall comply with relevant permit conditions issued by permitting authorities and shall implement the water quality monitoring plan, as issued, reviewed, and approved by the appropriate regulatory and resource agencies in coordination with the District, which shall ensure water quality is not impaired by the proposed aquaculture operation. If at any time during this monitoring, the water quality equals or exceeds the Basin Plan’s water quality objectives, as updated and amended, the project proponent shall immediately notify the relevant</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-C-WQ-1: Disturbance of Contaminated Sediment During Construction. Contaminated sediments are present in PD1, PD2, PD3, and PD4. In-water construction activities within these areas have the potential to disturb contaminated sediments, which could be released back into the water column and resuspended, resulting in the spread of the contaminants. Dredging of contaminated sediment could also degrade water quality by resuspending contaminated sediments and releasing constituents of concern. In addition, constituents of concern could be released when sediments are suspended in the water column. Resuspended contaminants may dissolve into the water column and become available for uptake by biota. Redeposition may occur near the dredge or construction areas, or, depending on the environmental conditions and controls, resuspended sediment may be transported to other nearby locations in the water body. Resuspension of contaminated sediments and release of constituents of concern could impact water quality by increasing contaminant levels to levels toxic to aquatic receptors. Lastly, the removal of creosote piles could result in resuspension of sediments contaminated with PAHs.</p>	PS	<p>permitting authorities and the District, and shall immediately identify specific actions that would eliminate the water quality impairments, approved by the relevant permitting authorities and the District. Approved BMPs shall include a regular monitoring, reporting, and site inspection program, as issued through operational permit conditions by relevant permitting authorities and resource agencies, to ensure that the operations are in compliance with BMPs related to the specific type of aquaculture being implemented.</p> <p>Implement MM-WQ-1 through MM-WQ-7, as described above.</p>	SU
<p>Impact-C-WQ-2: Contribution to Water Quality Impairments from Future Marina Operations.</p>	PS	<p>Implement MM-WQ-8, as described above.</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Operation of future development and redevelopment of marinas may impair water quality by increasing the chances of accidental discharge of gray water or black water directly into marine waters. In addition, pollutants potentially generated from boat maintenance without appropriate BMPs, in-water hull cleaning of copper-based anti-fouling paint, and accidental discharges of fuel and oil could negatively affect water quality. In addition, copper associated with anti-fouling hull paints has contributed to water quality impairments in San Diego Bay. The potential net increase in the number of vessel slips would potentially result in additional contributions to water quality impairments within the Bay.</p>	PS	Implement MM-WQ-9 , as described above.	LTS
<p>Impact-C-WQ-3: Water Quality Degradation from Aquaculture Operations. Depending on the type of aquaculture being practiced and the methods used, water quality degradation, which could include turbidity caused during harvesting and other similar operations, as well as biological oxygen demand, may occur during operation of aquaculture facilities.</p>			
<p>4.10 Noise and Vibration</p>			
<p>Project Impacts</p>			
<p>Impact-NOI-1: Exceed Thresholds at Parks During Construction. Proposed construction activities may exceed the construction noise thresholds during permissible construction hours, as summarized in Table 4.10-17 (i.e., 75 dBA L_{eq} 1-hour average for projects in Coronado, 75 dBA L_{eq} 8-hour average for projects in Imperial Beach, and 75 dBA L_{eq} 12-hour average for projects in San Diego), at existing parks. These impacts could occur if one or more project construction phase(s) occur within the relevant screening distances of a park, as identified in Table 4.10-19. (Actual impact distances could be shorter depending on site-specific details such as</p>	PS	<p>MM-NOI-1: Notify Users of Impacted Parks. As part of a development application, a project proponent shall determine whether construction noise will exceed 75 dBA L_{eq} at any near-by parks, if applicable. This determination may be based on the construction noise impact (screening) distances summarized in Table 4.10-19. Alternatively, the project proponent may retain a qualified acoustical consultant, approved by the District, to conduct a new or more detailed analysis based on project- and site-specific details. If construction noise levels at parks are determined to exceed 75 dBA L_{eq}, the project proponent or its construction contractor shall post public noticing at</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
ground conditions and the presence of any acoustical screening.)		affected parks not less than 48 hours prior to the start of construction activities. The signage shall notify users of possible high noise levels and provide details of alternative parks that are open nearby. The project proponent shall include this measure in the construction specification documents for the project. Prior to issuance of the construction specification documents for bid, the project proponent shall submit a copy of the documents and the proposed public notice sign to the District’s Development Services Department for approval. Prior to the commencement of construction activities, the project proponent shall submit documentation (including photographs) to the District’s Development Services Department demonstrating compliance with this measure.	
Impact-NOI-2: Exceed Thresholds at Other Noise-Sensitive Receptors During Construction. Proposed construction activities may exceed the construction noise thresholds during permissible construction hours, as summarized in Table 4.10-17 (i.e., 75 dBA L_{eq} 1-hour average for projects in Coronado, 75 dBA L_{eq} 8-hour average for projects in Imperial Beach, and 75 dBA L_{eq} 12-hour average for projects in San Diego), at existing noise-sensitive receptors. These impacts could occur if one or more project construction phase(s) occur within the relevant screening distances of noise-sensitive receptors, as identified in Table 4.10-19. (Actual impact distances could be shorter depending on site-specific details such as including ground conditions and the presence of any acoustical screening.)	PS	<p>MM-NOI-2: Avoid or Reduce Construction Noise from Pile Driving. During construction activities, the project proponent shall require all contractors to take steps to reduce pile driving noise, if any, associated with the project by implementing one of the following noise reduction methods:</p> <ul style="list-style-type: none"> • Avoid impact and vibratory pile driving by using quieter alternative installation methods, such as press-in piles or drilled piles (e.g., cast-in-drilled-hole, poured-in-place piles). • Use an acoustical shroud around impact pile driving. The shroud will be constructed of materials that provide a minimum sound transmission class of 28 (examples include sound-rated acoustical blankets). <p>MM-NOI-3: Implement General Best Practices for Construction Noise Abatement. During construction of future projects, the project proponent shall require all contractors to adhere to the following noise abatement measures:</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<ul style="list-style-type: none"> • All construction equipment and vehicles using internal combustion engines will be equipped with mufflers; air-inlet silencers where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. • All mobile or fixed construction equipment used on the project that is regulated for noise output by a local, State, or Federal agency will comply with such regulation while in the course of project activity. • All construction equipment will be properly maintained and serviced. • All construction equipment will be operated only when necessary and will be switched off when not in use. • Construction employees will be trained in the proper operation and use of the equipment to avoid careless or improper operation of equipment that could increase noise levels. • Construction site speed limits will be established and enforced during the construction period. • The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only. • The contractor will provide advance written notification of construction activities to residences within 300 feet of the construction site for projects that do not include pile driving, and to residences within 700 feet of the construction site for projects that include pile driving. Notification will include a brief overview of the proposed construction activity and its purpose and schedule. It also will include the name and contact information of the project manager or representative responsible for resolving any noise concerns. 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>MM-NOI-4: Install Temporary Noise Barriers to Shield Noise-Sensitive Receptors from Excessive Construction Noise Levels. As part of a development application, a project proponent shall ascertain whether construction noise will exceed 75 dBA L_{eq} at any noise-sensitive receptors. If so, prior to commencing construction, the project proponent shall install temporary noise barrier(s) between construction activities and noise-sensitive receptor(s) where noise levels exceed 75 dBA L_{eq}. Barriers may be constructed around the site perimeter or, when construction activities are restricted to a smaller portion of the site, around that smaller portion of the site, or around any noisy stationary construction equipment, such as generators or dewatering pumps. All such barriers must be at least 8 feet high and of sufficient height to break the line of sight between the construction equipment and the ground floor of any noise-sensitive receiver. These barriers shall be constructed in one of the following ways that the project proponent establishes, in writing and to the satisfaction of the District, will achieve a minimum sound transmission class (STC) rating of 28:</p> <ul style="list-style-type: none"> • From acoustical blankets hung over or from a supporting frame. The blankets should be firmly secured to the framework. The blankets should be overlapped by at least 4 inches at seams and taped and/or closed with hook-and-loop fasteners (i.e., Velcro®) so that no gaps exist. The largest blankets available should be used in order to minimize the number of seams. The blankets shall be draped to the ground to eliminate any gaps at the base of the barrier. • From commercially available acoustical panels lined with sound-absorbing material (the sound-absorptive 	

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<p>Impact-NOI-3: Exceed Local Noise Limits for Construction During Prohibited Hours. Although construction during prohibited hours (evening, nighttime, Sundays, or holidays) is not specifically proposed as part of the PMPU, it cannot be ruled out. Unless associated noise levels at existing noise-sensitive receptors can be reduced to comply with the stationary noise source limits of the applicable municipal code (refer to Tables 4.10-8, 4.10-10, and 4.10-13), construction noise impacts will be significant.</p>	PS	<p>faces of the panels should face the construction equipment).</p> <ul style="list-style-type: none"> From common construction materials such as plywood. <p>MM-NOI-5: Prohibit Exterior Construction Activities Outside of the Permitted Construction Hours. The project proponent shall not conduct typical exterior construction activities during the prohibited hours summarized in Table 4.10-17 (based on the city in which the construction site is located). Also, material or equipment deliveries and collections shall be prohibited during these hours to the extent feasible. Except for construction personnel specifically working on interior construction tasks within a completed building shell, construction personnel shall not start construction equipment on the job site during the prohibited hours. Subject to the District’s review and approval, non-typical time-sensitive construction activities may occur during the hours summarized in Table 4.10-17. Examples may include, but are not limited to, large concrete pours that must occur continuously once started, or activities requiring road closures that are deemed to be safer or less disruptive when implemented at night.</p>	SU
<p>Impact-NOI-4: Excessive Traffic Noise Increases on Existing Roadways Above Local Standards. Traffic on some roadways may increase noise levels at existing noise-sensitive receptors by 3 dB CNEL or more to a level that is above the local standards or guidelines of the applicable member city. This impact may occur at hotels/motels, parks, and homes adjacent to segments of Harbor Island Drive, Pacific Highway, and West Ash Street.</p>		<p>MM-NOI-6: Conduct Project-Specific Traffic Noise Analyses for Projects that Would Double the Traffic Volume on One or More Affected Streets. As part of a development application, the project proponent shall ascertain whether project implementation would double the vehicular traffic volume on any affected street(s). If no such increase is predicted, then no further traffic noise analysis is required. However, if such an increase is anticipated, the project proponent shall retain a qualified traffic consultant and a qualified acoustical consultant, each approved by the District.</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-NOI-5: Substantial Traffic Noise Increases Due to Roadway Improvements and Modifications. This impact may occur for proposed roadway improvement and modification projects if they remove acoustical shielding between the roadway and an adjacent noise-sensitive receptor, or horizontally realign the roadway so that the distance between traffic and the receiver is reduced by at least 50 percent.</p>	PS	<p>The consultants shall identify the roadways that would be affected by the project, quantify daily traffic volumes with and without the project, and determine what, if any, additional analysis is required to quantify traffic noise levels and identify potential noise control measures. If significant impacts are predicted, the assessment shall identify traffic noise abatement or reduction measures to be implemented by the project proponent as necessary to ensure project traffic does not cause: (1) an increase of 3 dB CNEL or more to a level that is above the local standards or guidelines of the applicable member city, or (2) any traffic noise increase of 5 dB CNEL or more, at a noise-sensitive receptor. Such measures may include, but would not be limited to:</p> <ul style="list-style-type: none"> • Noise barriers. • Quiet pavement. • Increased separation between roadways and sensitive land uses. • Upgrades, such as retrofitted sound-rated windows and doors for impacted sensitive buildings. • Traffic calming or other measures to reduce traffic speeds. 	SU
<p>Impact-NOI-6: Significant Noise Impact from Regional Mobility Hubs. Regional Mobility Hubs that provide new</p>	PS	<p>MM-NOI-7: Design Roadway Improvement and Modification Projects to Avoid Noise Increases Greater than 3 dB CNEL. During the design phase for specific roadway improvements and modifications, the project proponent shall ensure the proposed design does not: (1) remove existing noise barriers (if any) between the roadway and adjacent noise-sensitive receptors without replacing such barriers with like-kind, or (2) reduce the distance between the traffic and the receiver by 50 percent or more.</p>	SU
<p>MM-NOI-8: For Regional Mobility Hubs Within 125 feet of Noise-Sensitive Receptors, Design and</p>			

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
parking facilities may generate significant noise impacts if located within 125 feet of a noise-sensitive receptor.		<p>Construct Facilities to Control Noise from New Sources Such as Parking Lots. During the architectural and engineering design phases of a Regional Mobility Hub, and prior to the District’s approval of a Regional Mobility Hub, the project proponent shall retain an acoustical consultant approved by the District to evaluate the potential noise impacts of new parking lots or other proposed potential noise sources. The consultant shall assess the project details and prepare a written report to the District that identifies what, if any, additional analysis is required to quantify operational noise levels and potential noise abatement measures. Based on the consultant’s written report, the District shall determine whether additional technical analysis is necessary to quantify operational noise levels and to identify noise abatement measures in order to meet the noise standards specified below. Noise abatement or reduction measures, if required, may include, but are not limited to, reorientation or relocation of noise sources, administrative controls on the times and intensity of use, control of mechanical equipment noise (such as parking garage exhaust fans), or the addition of noise barriers or other acoustical screening. Noise abatement or reduction measures shall be implemented by the project proponent to ensure the Regional Mobility Hub does not cause: (1) an increase of 3 dBA or more over ambient noise levels resulting in a combined noise level greater than the applicable municipal code standard (refer to Tables 4.10-8, 4.10-10, and 4.10-13) at a noise-sensitive receptor, or (2) any increase of 5 dBA or more over ambient noise levels at a noise-sensitive receptor.</p>	
<p>Impact-NOI-7: Exceed Local Noise Limits for Commercial Developments. Building systems (e.g., mechanical equipment, plumbing systems, trash compactors) and other activities at commercial</p>	PS	<p>MM-NOI-9: Design and Construct New Commercial Uses to Control Noise from All Onsite Equipment and Activities. The project proponent shall design and construct all proposed commercial uses to ensure their</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>developments may generate noise at existing noise-sensitive receptors in excess of applicable local limits for stationary noise sources.</p>		<p>compliance with the applicable municipal code noise limits (refer to Tables 4.10-8, 4.10-10, and 4.10-13) at noise-sensitive receptors. To achieve this performance standard, during the architectural and engineering design, and prior to the District’s approval of the applicable future development project, the project proponent shall retain an acoustical consultant approved by the District to evaluate the design and provide written recommendations to the District, as necessary, to abate or reduce noise from all onsite equipment and activities. Such recommendations may include, but are not limited to, changes in site layout or equipment locations; sound power limits or specifications; rooftop parapet walls; acoustical absorption, louvers, screens, or enclosures; intake and exhaust silencers; or administrative controls (such as restricting certain activities to daytime hours). The District shall identify the noise abatement or reduction measures to be implemented by the project proponent which are necessary to ensure compliance with the applicable municipal code noise limits. If such compliance is infeasible, a project-level environmental review shall be required.</p>	
<p>Impact-NOI-8: Exceed Local Noise Limits for Outdoor Use Areas and Outdoor Special Events. If new developments include outdoor use areas (e.g., parks, outdoor dining, patios, roof decks, pool decks) with amplified music, or host large outdoor special events such as weddings, exhibits, social gatherings, fundraisers, concerts, music festivals, and art exhibits, such activities may exceed applicable local noise limits at existing noise-sensitive receptors, especially if events are attended by large numbers of people or would include live or recorded music.</p>	PS	<p>MM-NOI-10: Design and Operate Outdoor Activity Areas to Control Operational Noise. The project proponent and any future owner/operator of proposed developments shall design, construct, and operate outdoor activity areas (e.g., outdoor dining areas, patios, roof decks, pool decks), to ensure their compliance with the applicable municipal code noise limits (refer to Tables 4.10-8, 4.10-10, and 4.10-13) at noise-sensitive receptors. To achieve this performance standard, as part of the site-specific environmental review of a proposed project, the project proponent shall retain an acoustical consultant approved by the District to evaluate the design and provide written</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>recommendations to the District, as necessary, to abate or reduce noise from all outdoor activity areas. Such recommendations may include, but are not limited to, changes in location and layout, sound power limits or specifications for audio systems, loudspeaker placement and direction, acoustical shielding (barriers, walls, or roofs), or acoustical absorption. The District shall identify the noise abatement or reduction measures to be implemented by the project proponent that are necessary to ensure compliance with the applicable municipal code noise limits. If such compliance is infeasible, a project-level environmental review shall be required.</p>	
		<p>MM-NOI-11: Incorporate Operational/Contract Specifications to Minimize Exterior Special Event Noise and Regulate Special Events at New Parks. Special events may include occasional outdoor gatherings, public dances, shows, sporting events, entertainment events (including concerts), parades, and civic functions. Such events at new parks proposed under the PMPU shall be properly regulated for noise control and shall observe the requirements identified below. In addition, the project proponent and any future owner/operator of proposed developments hosting exterior special events shall observe the following requirements and incorporate them into the contract specifications for outdoor events:</p> <ol style="list-style-type: none"> 1. Any special event at a new park and any exterior special events at proposed developments shall not exceed the applicable municipal code noise limits (refer to Tables 4.10-8, 4.10-10, and 4.10-13) at a noise-sensitive receptor. 2. Any event that fails to comply with requirement 1, above, shall only be permitted if an applicable event permit, or variance or exemption from the code, has 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-NOI-9: Exceed Caltrans Guideline Criteria for Potential Building Damage During Construction. Vibration levels due to various construction activities could exceed recommended criteria for potential building damage. The actual impacts, if any, would depend on the equipment used and the distance to the affected structure(s). Specifically, a significant impact would occur if project construction occurs within one or more of the threshold distances identified in Table 4.10-22 based on the actual construction equipment to be used.</p>	PS	<p>been sought and granted by the appropriate agency (city or District).</p> <p>3. The project shall comply with all city and District requirements related to hosting outdoor events.</p> <p>MM-NOI-12: Avoid or Reduce Potentially Damaging Vibration at Nearby Buildings from Project Construction. During construction activities, the project proponent shall avoid working within the potential damage threshold distances identified in Table 4.10-22 based on the construction equipment to be used and the type, age, and condition of nearby structures (including structures owned or occupied by neighboring District tenants). In the event the District determines that it is not feasible for the project proponent to avoid construction activities within the potential damage threshold distances, the project proponent shall reduce the potential impact to the maximum extent feasible through the implementation of alternate construction equipment or techniques approved by the District such as, but not limited to, the following:</p> <ul style="list-style-type: none"> • Replacing impact pile driving with press-in piles or drilled piles (e.g., cast-in-drilled-hole, poured-in-place piles). • Using smaller categories of equipment, such as a Bobcat or skid steer instead of full-size graders or bulldozers. <p>If the District determines that these techniques cannot be fully implemented or are not sufficient to place the affected receivers outside of the applicable threshold distance, then the project proponent shall take the following additional steps to protect buildings within the potential damage threshold distances for construction vibration damage:</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-NOI-10: Exceed Caltrans Guideline Criteria for Potential Human Annoyance at Sensitive Receptors During Project Construction. Vibration levels due to various construction activities could exceed recommended criteria for potential human annoyance. The actual impacts, if any, would depend on the equipment used and the distance to the affected sensitive buildings. Specifically, a significant impact would occur if project construction occurs within the “distinctly perceptible” threshold</p>	PS	<ul style="list-style-type: none"> • The project proponent/contractor shall retain a qualified structural or geotechnical engineer to conduct preconstruction surveys of neighboring structures (including photographing and/or videotaping) to document existing building conditions for future comparison if any vibration-related damage is suspected or results from construction-related activities. • Based on professional judgment and review of the specific buildings involved, the structural/geotechnical engineer shall provide written recommendations to the District for updated vibration thresholds and revised impact distances for potentially affected buildings. • If considered appropriate by the District, the project proponent shall conduct monitoring during construction to check for vibration-related damage during pile driving. Such monitoring may include vibration measurements obtained inside or outside of the buildings or other tests and observations deemed necessary by the District. • If any damage to existing buildings is determined to occur because of project construction, the project proponent shall be financially responsible for the necessary repairs, structural or cosmetic, to return the damaged building to its pre-existing state. 	SU
<p>MM-NOI-13: Avoid or Reduce Potentially Annoying Vibration at Occupied Sensitive Buildings During Project Construction. During construction activities, the project proponent shall avoid working within the distinctly perceptible threshold distances identified in Table 4.10-23 from occupied sensitive buildings, based on the construction equipment to be used. In the event the District determines that it is not feasible for the project proponent to avoid construction activities</p>			

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
distance of an occupied sensitive building, as identified in Table 4.10-23, based on the actual construction equipment to be used.		within the potential annoyance threshold distances, the project proponent shall reduce the potential impact to the extent feasible through the implementation of alternate construction equipment or techniques approved by the District such as, but not limited to, the following: <ul style="list-style-type: none"> • Replacing impact pile driving with press-in piles or drilled piles (e.g., cast-in-drilled-hole, poured-in-place piles). • Using smaller categories of equipment, such as a Bobcat or skid steer instead of full size graders or bulldozers. 	
Impact-C-NOI-1: Exceed the Established 75 dBA L_{eq} Thresholds at Noise-Sensitive Receptors. Cumulative construction activities may exceed the established 75 dBA L_{eq} thresholds at noise-sensitive receptors during permissible construction hours.	PS	Implement MM-NOI-1, MM-NOI-2, MM-NOI-3, and MM-NOI-4 , as described above.	SU
Impact-C-NOI-2: Generate Noise in Excess of Local Limits. Cumulative construction activities occurring during prohibited hours (evening, nighttime, Sundays, or holidays) may generate noise in excess of local limits for stationary noise sources at existing noise-sensitive receptors.	PS	Implement MM-NOI-5 , as described above.	SU
Impact-C-NOI-3: Increase Noise Levels at Existing Noise-Sensitive Receptors by 3 dB CNEL or More. Cumulative traffic on some roadways could increase noise levels at existing noise-sensitive receptors by 3 dB CNEL or more to a level that is above the local standards or guidelines of the applicable member City.	PS	Implement MM-NOI-6 and MM-NOI-7 , as described above.	SU
Impact-C-NOI-4: Generate Noise at Sensitive Receptors in Excess of Local Limits. Cumulative operation of future developments may generate noise at sensitive receptors in excess of local limits for stationary noise sources.	PS	Implement MM-NOI-8, MM-NOI-9, MM-NOI-10, and MM-NOI-11 , as described above.	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-C-NOI-5: Exceed Caltrans Guideline Criteria for Potential Building Damage. Cumulative groundborne vibration may exceed Caltrans guideline criteria for potential building damage during project construction.</p>	PS	Implement MM-NOI-12 , as described above.	LTS
<p>Impact-C-NOI-6: Exceed Caltrans Guideline Criteria for Potential Human Annoyance at Sensitive Receptors. Cumulative groundborne vibration may exceed Caltrans guideline criteria for potential human annoyance at sensitive receptors during project construction.</p>	PS	Implement MM-NOI-13 , as described above.	SU
4.12 Public Services			
Project Impacts			
<p>Impact-PS-1: Potential to Result in Substantial Adverse Physical Impacts from the Provision of New or Physically Altered Police Protection Facilities Associated with Operation of Future Development Projects Consistent with the Proposed PMPU. Implementation of the proposed PMPU, which includes development and operation of future projects (including visitor-serving facilities) would result in higher daily visitation to the proposed PMPU area, creating a greater demand for police services, which could require the expansion of, or new construction of, police facilities. The timing, duration, location, and extent of possible construction activities, as well as the certainty of the need for new or expanded police facilities are all unknown at this time. Potential impacts from the construction of new or expanded police facilities include construction-related air emissions, GHG emissions, noise and vibration, and energy use; disturbance of biological resources, cultural resources, tribal cultural resources, and/or contaminated soils; drainage and soil-related impacts; and impacts from the expanded connection of utilities to serve the new or expanded government facility. Operational impacts could include new or additional siren noise near sensitive receptors that may cause ambient noise levels to exceed</p>	PS	<p>MM-PS-1: Conduct Project-Specific Reviews of the Adequacy of Police Protection Services with the SDPD and Coast Guard to Determine if a New or Expanded Government Facility Will Be Required. During project-specific environmental review of future development projected under the proposed PMPU, the District shall require a site-specific study, consisting of coordination with the SDPD and/or Coast Guard (whichever agency[ies] provide police protection services to the area) regarding the future project, which shall include a written record of the results of the coordination, to determine whether the project would increase the demand on police services such that new or expanded facilities would be required to maintain adequate police services as determined by the SDPD and/or Coast Guard. Should it be determined that the future project would cause or contribute to the need for new or expanded police facilities, the District shall: (1) analyze the potential environmental effects of the construction and operation of the police facility in accordance with CEQA and ensure any impacts from the construction of any such facilities are mitigated to the extent feasible under the law; (2) confirm a CEQA document has been approved and certified for the new</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
hourly or 24-hour noise level standards of the City’s Municipal Code and General Plan, increased VMT, and the associated effects on air quality, GHGs, and energy use.		or expanded police facility and any associated mitigation required associated with its construction and operation; or (3) confirm a CEQA document is under preparation for construction and operation of the new or expanded police facility. If the District conducts the CEQA analysis as part of the project analysis, the analysis must consider all details about the needed police facility, including the known location, design, construction and operational details, and timing. In addition, the CEQA analysis must identify mitigation measures to reduce any significant impacts that could result from construction and operation of any new or expanded government facility. Mitigation measures as listed in the proposed PMPU’s Mitigation Monitoring and Reporting Program (MMRP) shall be considered where needed to avoid a significant impact. Importantly, this mitigation measure shall also be required for Impact-C-PS-1 and shall be applicable to potential cumulative fire protection facility-related impacts and require coordination with SDFD and HPD consistent with the direction provided within this mitigation measure.	
Impact-PS-2: Potential to Result in Substantial Adverse Physical Impacts from the Construction of New or Physically Altered Parks Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include construction of new or expanded parks. Potential impacts from the construction of new or expanded parks include construction-related air emissions (Impact-AQ-2), biological resources (Impact-BIO-2 and Impact-BIO-5), cultural resources (Impact-CUL-1 and Impact-CUL-2), tribal cultural resources (Impact-CUL-3), paleontological resources (Impact-GEO-1), noise and vibration (Impact-NOI-1 through Impact-NOI-5), and/or contaminated soils (Impact-HAZ-1 and Impact-HAZ-2).	PS	Implement MM-AQ-2 through MM-AQ-8 , as described in Section 4.2, <i>Air Quality and Health Risk</i> . Implement MM-BIO-2 and MM-BIO-5 , as described in Section 4.3, <i>Biological Resources</i> . Implement MM-CUL-1 through MM-CUL-3 , as described in Section 4.4, <i>Cultural Resources and Tribal Cultural Resources</i> . Implement MM-GEO-1 , as described in Section 4.5, <i>Geology and Soils</i> . Implement MM-GHG-2 , as described in Section 4.6, <i>Greenhouse Gas Emissions and Energy</i> . Implement MM-NOI-1 through MM-NOI-5 , as described in Section 4.10, <i>Noise and Vibration</i> .	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Impact-PS-3: Potential to Result in Substantial Adverse Physical Impacts from the Operation of New or Physically Altered Parks Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include new or expanded parks. Potential impacts from the operation of such new or expanded parks include operation-related air emissions (Impact-AQ-9 through Impact-AQ-12), biological resources (Impact-BIO-8 and Impact-BIO-9), and greenhouse gas emissions (Impact-GHG-1 and Impact-GHG-2).	PS	Implement MM-HAZ-1 and MM-HAZ-2 , as described in Section 4.7, <i>Hazards and Hazardous Materials</i> . Implement MM-AQ-9 through MM-AQ-12 , as described in Section 4.2. Implement MM-BIO-8 and MM-BIO-9 , as described in Section 4.3. Implement MM-GHG-1 and MM-GHG-2 , as described in Section 4.6.	SU
Impact-REC-1: Potential to Result in Substantial Adverse Physical Impacts from the Construction of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include construction of new or expanded recreational facilities. Potential impacts from the construction of new or expanded recreational facilities could involve construction-related air emissions (Impact-AQ-2 and Impact-AQ-4); biological resources (Impact-BIO-2 and Impact-BIO-5), cultural resources (Impact-CUL-1 and Impact-CUL-2), tribal cultural resources (Impact-CUL-3), paleontological resources (Impact-GEO-1), noise and vibration (Impact-NOI-1 through Impact-NOI-5), contaminated soils (Impact-HAZ-1 and Impact-HAZ-2), and water quality (Impact-WQ-1).	PS	Implement MM-AQ-2 through MM-AQ-9 , as described in Section 4.2. Implement MM-BIO-2 and MM-BIO-5 , as described in Section 4.3. Implement MM-CUL-1 through MM-CUL-3 , as described in Section 4.4. Implement MM-GEO-1 , as described in Section 4.5. Implement MM-GHG-2 , as described in Section 4.6. Implement MM-HAZ-1 and MM-HAZ-2 , as described in Section 4.7. Implement MM-NOI-1 through MM-NOI-5 , as described in Section 4.10. Implement MM-WQ-1 through MM-WQ-7 , as described in Section 4.8.	SU
Impact-REC-2: Potential to Result in Substantial Adverse Physical Impacts from the Operation of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include operation of new or expanded recreational facilities. Potential impacts from new or expanded recreational facilities could involve operation-related air emissions (Impact-AQ-3 and	PS	Implement MM-AQ-9 , through MM-AQ-12 , as described in Section 4.2. Implement MM-BIO-8 and MM-BIO-9 , as described in Section 4.3. Implement MM-GHG-1 and MM-GHG-2 , as described in Section 4.6. Implement MM-WQ-8 , as described in Section 4.8.	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-AQ-5), biological resources (Impact-BIO-8 and Impact-BIO-9), greenhouse gas emissions (Impact-GHG-1), and/or water quality (Impact-WQ-2).</p>			
<p>Impact-C-PS-1: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Provision of New or Physically Altered Fire and Police Protection Facilities. Implementation of the proposed PMPU, when combined with past, present, and reasonably foreseeable future development projects, would create a greater demand for fire and police protection services. This increased demand may require the construction of new or physically altered government facilities in order to maintain acceptable service ratios for the region. Because the timing, duration, location, and extent of any new or expanded fire and police facilities required to serve future development under the proposed PMPU are not known, construction of these facilities could result in physical impacts on the environment. In combination with other projects in or adjacent to the proposed PMPU area, construction of new or expanded fire and police protection facilities could result in a cumulatively considerable contribution to a significant cumulative impact related to fire and police protection.</p>	PS	Implement MM-PS-1 , as described above.	SU
<p>Impact-C-PS-2: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Construction of New or Physically Altered Parks Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include construction of new or expanded parks. Potential impacts from the construction of new or expanded parks could involve construction-related air emissions (Impact-AQ-2), biological resources (Impact-BIO-1 and Impact-BIO-2), cultural resources (Impact-CUL-1 and Impact-CUL-2), tribal cultural resources (Impact-CUL-3), energy use</p>	PS	<p>Implement MM-AQ-2 through MM-AQ-8, as described in Section 4.2, <i>Air Quality and Health Risk</i>. Implement MM-BIO-2 and MM-BIO-5, as described in Section 4.3, <i>Biological Resources</i>. Implement MM-CUL-1 through MM-CUL-3, as described in Section 4.4, <i>Cultural Resources and Tribal Cultural Resources</i>. Implement MM-GEO-1, as described in Section 4.5, <i>Geology and Soils</i>.</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>(Impact-EN-1), noise and vibration (Impact-NOI-1 through Impact-NOI-3), and/or contaminated soils (Impact-HAZ-1 through Impact-HAZ-4). In combination with other projects in or adjacent to the proposed PMPU area, construction of new or expanded parks could result in a cumulatively considerable contribution to a significant cumulative impact related to parks.</p>		<p>Implement MM-GHG-2, as described in Section 4.6, <i>Greenhouse Gas Emissions and Energy</i>. Implement MM-NOI-1 through MM-NOI-5, as described in Section 4.10, <i>Noise and Vibration</i>. Implement MM-HAZ-1 and MM-HAZ-2, as described in Section 4.7, <i>Hazards and Hazardous Materials</i>.</p>	
<p>Impact-C-PS-3: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Operation of New or Physically Altered Parks Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include new or expanded parks. Potential impacts from the operation of new or expanded parks could involve operation-related air emissions (Impact-AQ-3 and Impact-AQ-6), biological resources (Impact-BIO-8, Impact-BIO-12, and Impact-BIO-14), and greenhouse gas emissions (Impact-GHG-1). In combination with other projects in or adjacent to the proposed PMPU area, operation of new or expanded parks could result in a cumulatively considerable contribution to a significant cumulative impact related to parks.</p>	PS	<p>Implement MM-AQ-9 through MM-AQ-12, as described in Section 4.2. Implement MM-BIO-8 and MM-BIO-9, as described in Section 4.3. Implement MM-GHG-1 and MM-GHG-2, as described in Section 4.6.</p>	SU
<p>Impact-C-REC-1: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Construction of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include new or expanded recreational facilities. Potential impacts from the construction of new or expanded recreational facilities could involve construction-related air emissions (Impact-AQ-2 and Impact-AQ-4), biological resources (Impact-BIO-1, Impact-BIO-2, Impact-BIO-3, Impact-BIO-4, and Impact-BIO-11), cultural resources (Impact-CUL-1 and Impact-CUL-2), tribal cultural resources (Impact-CUL-3), energy use (Impact-EN-1), noise and vibration (Impact-NOI-1</p>	PS	<p>Implement MM-AQ-2 through MM-AQ-9, as described in Section 4.2. Implement MM-BIO-2 and MM-BIO-5, as described in Section 4.3. Implement MM-CUL-1 through MM-CUL-3, as described in Section 4.4. Implement MM-GEO-1, as described in Section 4.5. Implement MM-GHG-2, as described in Section 4.6. Implement MM-HAZ-1 and MM-HAZ-2, as described in Section 4.7. Implement MM-NOI-1 through MM-NOI-5, as described in Section 4.10.</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>through Impact-NOI-3), contaminated soils (Impact-HAZ-1 through Impact-HAZ-4), and/or water quality (Impact-WQ-1). In combination with other projects in or adjacent to the proposed PMPU area, construction of new or expanded recreational facilities could result in a cumulatively considerable contribution to a significant cumulative impact related to recreational facilities.</p>		<p>Implement MM-WQ-1 through MM-WQ-7, as described in Section 4.8.</p>	
<p>Impact-C-REC-2: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Operation of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include operation of new or expanded recreational facilities. Potential impacts from new or expanded recreational facilities could involve operation-related air emissions (Impact-AQ-3 and Impact-AQ-6), biological resources (Impact-BIO-8, Impact-BIO-12, and Impact-BIO-14), greenhouse gas emissions (Impact-GHG-1), and/or water quality (Impact-WQ-2). In combination with other projects in or adjacent to the proposed PMPU area, construction of new or expanded recreational facilities could result in a cumulatively considerable contribution to a significant cumulative impact related to recreational facilities.</p>	<p>PS</p>	<p>Implement MM-AQ-9, through MM-AQ-12, as described in Section 4.2. Implement MM-BIO-8 and MM-BIO-9, as described in Section 4.3. Implement MM-GHG-1 and MM-GHG-2, as described in Section 4.6. Implement MM-WQ-8, as described in Section 4.8.</p>	<p>SU</p>
<p>4.14 Transportation Impact Fee Program</p>			
<p>Project Impacts</p>			
<p>Impact-TRA-1: Increase in Total VMT Associated with Future Development Consistent with the Proposed PMPU. Future development under the proposed PMPU would result in a net increase in VMT in PD1, PD2, PD3, PD8, PD9, and PD10 as a result of developing retail, restaurant, and recreational land uses in the future. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b).</p>	<p>PS</p>	<p>MM-TRA-1: Establish a Transportation Impact Fee Program. Consistent with ECON Policy 1.2.6 of the proposed PMPU, prior to approval of the first future development project allowed under the proposed PMPU, the District shall establish an impact fee program for the funding of transportation infrastructure improvements that would reduce VMT, including mobility hubs, pedestrian improvements, and other mobility-related infrastructure and amenities specified</p>	<p>SU</p>

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>in the proposed PMPU. The impact fee program will identify needed improvements throughout the PMPU area consistent with Chapter 4, <i>Baywide Development Standards</i>, of the proposed PMPU and include guidelines to determine the proportionate fair share contributions by public and private project proponents on a case-by-case basis and based on the project’s contribution to VMT within the proposed PMPU area. These improvements may be implemented through a combination of private investments, public investments, and private-public partnerships based on a schedule established by the District to minimize and offset VMT-related impacts on the transportation system from future PMPU-related development. The fee program shall be in place prior to approval of the first future development project associated with the proposed PMPU.</p> <p>MM-TRA-2: Contribute Fair Share Impact Fees. During project-specific environmental review for all future projects proposed consistent with the PMPU, the project proponent(s) shall prepare project-specific studies to identify the appropriate fees that will constitute a fair share contribution based on the impacts of individual projects in accordance with the fee program established under MM-TRA-1. Once the appropriate fees have been determined by the District, the project proponent shall pay its proportionate fair share contribution to the District prior to the issuance of a building permit. Payment into the fee program based upon pre-established formulas developed as part of MM-TRA-1 will serve as mitigation for project-specific VMT-related impacts. Project proponents shall also contribute development impact fees to the applicable member cities that have jurisdiction over the issuance of building permits for future projects. This would include the City of San Diego (Municipal Code</p>	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-TRA-2: Increase in VMT/Employee Associated with Future Development Consistent with the Proposed PMPU. Future development under the proposed PMPU would result in an average VMT per employee above the 2050 Regional Average within PD2. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b).</p>	PS	<p>Section 142.0640), City of Imperial Beach (Municipal Code Section 15.48), and City of Coronado (Municipal Code Section 8.20). The project proponent shall pay the applicable development impact fee required by the local jurisdiction at the time required by the local jurisdiction.</p> <p>MM-TRA-3: Implement a Transportation Demand Management Plan. Prior to the approval of future development projects proposed in PD2, PD3 PD8, PD9, or PD10, the project proponent shall prepare and submit to the District for approval a TDM Plan as listed in the most recent Regional Transportation Plan prepared by SANDAG. The TDM Plan shall include measures, such as ridesharing initiatives (e.g., carpooling), promoting alternative work schedules and telework, subsidizing employee use of public transit, and promoting bicycling, walking, and the use of public transit, to reduce VMT either to 15 percent below the regional average (for future employment VMT generating uses [e.g., hotels] in PD2) or to no net increase in VMT (for future retail, restaurant, and recreational projects in PD2, PD3, PD8, PD9, or PD10). The project proponent shall implement the TDM Plan prior to and during project operations.</p>	SU
<p>Impact-TRA-3: Increase in VMT Due to Transportation Infrastructure Improvements Associated with the Proposed PMPU. Implementation of the proposed PMPU would include improvements to existing transportation</p>	PS	<p>Implement MM-TRA-1, MM-TRA-2, and MM-TRA-3, as described above.</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>infrastructure in PD2 and PD3, which would increase VMT by making vehicle trips more attractive within these planning districts and thereby inducing travel. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b).</p>	PS	<p>Implement MM-TRA-1, MM-TRA-2, and MM-TRA-3, as described above.</p>	SU
<p>Impact-C-TRA-1: Increase in Total VMT Associated with Future Development Consistent with the Proposed PMPU. Future development under the proposed PMPU would result in a net increase in VMT in PD1, PD2, PD3, PD8, PD9, and PD10 as a result of developing retail, restaurant, and recreational land uses in the future. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b).</p>	PS	<p>Implement MM-TRA-1, MM-TRA-2, and MM-TRA-3, as described above.</p>	SU
<p>Impact-C-TRA-2: Increase in VMT/Employee Associated with Future Development Consistent with the Proposed PMPU. Future development under the proposed PMPU would result in an average VMT per employee above the 2050 Regional Average within PD2. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b).</p>	PS	<p>Implement MM-TRA-1, MM-TRA-2, and MM-TRA-3, as described above.</p>	SU
<p>Impact-C-TRA-3: Increase in VMT Due to Transportation Infrastructure Improvements Associated with the Proposed PMPU. Implementation of the proposed PMPU would include improvements to existing transportation infrastructure in PD2 and PD3, which would increase VMT by making vehicle trips more attractive within these planning districts and thereby inducing travel. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b).</p>	PS	<p>Implement MM-TRA-1, MM-TRA-2, and MM-TRA-3, as described above.</p>	SU

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.15 Utilities and Service Systems			
Project Impacts			
<p>Impact-UTIL-1: Utility-Related Land Disturbance. While the specifications of individual future development, including timing, location, and size, are not known at this time, the potential impacts associated with installation of new or expanded utility facilities to serve specific future development are generally known, and significant impacts associated with ground-disturbing activities would potentially occur. The impacts of ground-disturbing activities are analyzed within this PEIR, including in Sections 4.3, 4.4, 4.5, 4.7, and 4.8. Based on the determinations within these sections, land disturbance associated with installing utility facilities would also have the potential to result in a significant impact on these resources.</p>	PS	<p>Implement MM-BIO-2, MM-BIO-5, MM-BIO-8, and MM-BIO-9, as described in Section 4.3, <i>Biological Resources</i></p> <p>Implement MM-CUL-1 through MM-CUL-3, as described in Section 4.4, <i>Cultural Resources and Tribal Cultural Resources</i></p> <p>Implement MM-GEO-1, as described in Section 4.5, <i>Geology and Soils</i></p> <p>Implement MM-HAZ-1 and MM-HAZ-2, as described in Section 4.7, <i>Hazards and Hazardous Materials</i></p> <p>Implement MM-WQ-1 through MM-WQ-7, as described in Section 4.8, <i>Hydrology and Water Quality</i>.</p>	SU
<p>Impact-UTIL-2: Insufficient Water Supplies Available to Serve the Proposed PMPU During Operation of Future Development. Due to the significant increase in water demand as a result of implementation of the proposed PMPU, sufficient water supplies may not be available to serve future development under the proposed PMPU during normal, dry, and multiple dry years. Therefore, given the increase in water demand, which is necessary for operation of future development allowed under the proposed PMPU, potential impacts are considered significant.</p>	PS	<p>MM-UTIL-1: Update the UWMP with New Growth Projections. Within 6 months of Coastal Commission certification of the proposed PMPU, the District shall provide SANDAG with amended growth assumptions and changes to water and land use designations associated with the proposed PMPU. The District shall coordinate with SANDAG and the City of San Diego to ensure the UWMPs are updated as part of the upcoming revision cycle to reflect the updated growth assumptions of the proposed PMPU. Until the UWMP is updated to account for projects proposed under a certified PMPU, the District shall implement MM-UTIL-2 to ensure sufficient water supply exists for individual projects.</p> <p>MM-UTIL-2: Prepare a Water Demand Analysis to Determine if Sufficient Water Supplies are Available. Prior to District’s approval of any future development project that would equate to a water demand project, as defined by CEQA Guidelines Section</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
		<p>15155, and before the successful update to the applicable UWMP(s) required under MM-UTIL-1, the District shall require the project proponent to prepare a water demand analysis.</p> <p>In the event that project demand exceeds available supplies after incorporation of all feasible water-efficient measures, the project proponent shall be required to demonstrate how and where additional supply to meet the project’s demand will be secured, as well as analyzing the potential impacts of acquiring water from a new water source; or the project shall be redesigned to further reduce the demand for water to be within the available supplies. The District shall not approve any future development proposal unless the project proponent can demonstrate that the project’s water supply demands will be met.</p> <p>MM-UTIL-3: Implement Water Conservation Measures. The project proponent shall incorporate and implement water-efficient design measure into project design. Water-efficient design measures shall at a minimum, include:</p> <ul style="list-style-type: none"> • Implement indoor water reduction measures, including high-efficiency toilets, high-efficiency urinals, low-flow faucets, and low-flow showers (as applicable). • Install only drought-tolerant landscaping, per PMPU ECO Policy 1.1.8, and perform any landscaping watering through a drip system or low-flow irrigation devices. • Install cisterns above or below ground that shall collect and store runoff from rooftops and other impervious surfaces. • Install water-efficient water coolers and equipment and monitor cooling tower and boiler water chemistry to minimize mineral buildup in the system 	

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-C-UTIL-1: Potential to Result in a Cumulatively Considerable Adverse Impact Related to the Requirement for New or Expanded Utilities. Operation of future development consistent with the proposed PMPU could increase demand on utilities serving the proposed PMPU area, including water, wastewater, stormwater, electricity, natural gas, and telecommunications, potentially requiring the relocation or construction of new or expanded utilities to serve future development and uses. While the specifications of individual future development, including timing, location, and size, are not known at this time, the potential impacts associated with installation of new or expanded utility facilities to serve specific future development are generally known and significant impacts associated with ground-disturbing activities would potentially occur. In combination with other operational activity in or adjacent to the proposed PMPU area, construction of these facilities could result in cumulatively considerable physical impacts on the environment.</p>	PS	<p>and maximize the number of times water can be recycled through the system.</p> <ul style="list-style-type: none"> • Limit the use of turf. • Educate employees on water conservation measures on an annual basis and post water conservation stickers, signs, and posters in bathrooms, kitchens, cafeterias, conference rooms, and other places where employees congregate. <p>Implement MM-BIO-2, MM-BIO-5, MM-BIO-8, MM-BIO-9, MM-CUL-1 through MM-CUL-3, MM-GEO-1, MM-HAZ-1, MM-HAZ-2, and MM-WQ-1 through MM-WQ-7, as described above.</p>	SU
<p>Impact-C-UTIL-2: Potential to Result in a Cumulatively Considerable Insufficient Water Supplies During Operation. Due to the significant increase in water demand as a result of implementation of the proposed PMPU, sufficient water supplies may not be available to serve future development under the proposed PMPU during normal, dry, and multiple dry years. Therefore, in</p>	PS	<p>Implement MM-UTIL-1, MM-UTIL-2, and MM-UTIL-3, as described above.</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>combination with the operation of other future development in or adjacent to the proposed PMPU area, given the increase in water demand, which is necessary for operation of future development, this would result in a cumulatively considerable impact related to water supplies.</p>		<p>MM-C-UTIL-4: Update the Five-Year Review Report with New Growth Projections. Within 6 months of the CCC’s certification of the proposed PMPU, the District shall provide the County of San Diego with amended growth assumptions and changes to water and land use designations associated with the proposed PMPU. The District will coordinate with County of San Diego Local Enforcement Agency to ensure the Five-Year Review Report is updated as part of the next soonest revision cycle to reflect the updated growth assumptions of the proposed PMPU. Until the Five-Year Review Report is updated to account for projects proposed under a certified PMPU, the District shall implement MM-UTIL-5 to ensure sufficient landfill capacity exists for individual projects.</p> <p>MM-C-UTIL-5: Conduct Site-Specific Environmental Review to Assess Landfill Capacity and Implement Measures to Reduce Solid Waste. Prior to implementation of MM-UTIL-4, during site-specific environmental review for future development occurring under the proposed PMPU, the District shall assess the capacity of existing landfills serving the project site during construction and operation. Project proponents shall incorporate measures that reduce a project’s solid waste, including, but not limited to, compliance with the City of San Diego’s Recycling Ordinance, which requires 50 percent of solid waste to be recycled, and City of San Diego’s Construction and Demolition Debris Deposit Ordinance, which would require 65 percent of all construction and demolition</p>	LTS

Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
<p>Impact-C-UTIL-4: Potential to Result in Cumulatively Considerable Adverse Impacts Related to Exceeding Capacity at Existing Landfills During Operation. Operation associated with future development under the proposed PMPU could result in a substantial increase in solid waste, the disposal of which could exceed existing landfill capacity. In combination with other operational activity in or adjacent to the proposed PMPU area, this would result in a cumulatively considerable impact related to capacity at existing landfills.</p>	PS	<p>debris be recycled. In addition, the District shall encourage project proponents to use recycled, regional, and rapidly renewable materials during construction. The District shall not approve any future development proposals unless the project proponent can demonstrate sufficient landfill capacity is available to meet the project’s solid waste demands.</p> <p>Implement MM-UTIL-4 and MM-UTIL-5, as described above.</p>	LTS

1.1 Project Overview

The San Diego Unified Port District (District) is undertaking a comprehensive update to its existing Port Master Plan (PMP). The proposed Port Master Plan Update (PMPU) provides the official goals and planning policies, as well as water and land uses, for development and conservation of the District lands, tidelands, and submerged lands (collectively, Tidelands or District Tidelands) that comprise the PMPU area. The proposed PMPU would implement the approximately 30-year planning vision by identifying allowable water and land uses and providing policies that address the following six Elements in eight of the District's 10 planning districts (individually, PD and collectively, PDs):

- Ecology
- Economics
- Environmental Justice
- Safety and Resiliency
- Mobility
- Water and Land Use

The 10 planning districts consist of the following:

- PD1: Shelter Island
- PD2: Harbor Island
- PD3: Embarcadero
- PD4: Working Waterfront
- PD5: National City Bayfront¹
- PD6: Chula Vista Bayfront
- PD7: South Bay
- PD8: Imperial Beach Oceanfront
- PD9: Silver Strand
- PD10: Coronado Bayfront

1.2 Purpose of the California Environmental Quality Act and the Program Environmental Impact Report

This Draft Program Environmental Impact Report (PEIR) evaluates the environmental effects of the proposed PMPU and has been prepared in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the procedures for implementing CEQA set forth in the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). This Draft PEIR has also been prepared in compliance with the District's *Guidelines for Compliance with CEQA* (Resolution 97-191; Clerk Document No. 36294).

CEQA was enacted by the California legislature in 1970. As noted under State CEQA Guidelines Section 15002, CEQA has four basic purposes:

1. Inform governmental decision-makers and the public about the potential significant environmental effects of proposed activities.

2. Identify the ways in which environmental damage can be avoided or significantly reduced.
3. Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
4. Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

An environmental impact report is an informational document, the purpose of which is to inform members of the public and agency decision-makers of the significant environmental effects of a proposed project, identify feasible ways to reduce the significant effects of the proposed project through mitigation measures, and describe a reasonable range of feasible alternatives to the project that would reduce one or more significant effects and still meet the proposed project's basic objectives. In instances where significant impacts cannot be avoided or mitigated, a proposed project may nonetheless be carried out or approved if the approving agency finds that economic, legal, social, technological, or other benefits outweigh the unavoidable significant environmental impacts.

According to State CEQA Guidelines Section 15168, a PEIR may be prepared on a series of actions that can be characterized as one large project and that are related either geographically or as individual activities carried out under the same authorizing statutory or regulatory authority, and that generally have similar environmental effects that can be mitigated in similar ways. One of the benefits of preparing a PEIR is that it allows for a reduction in paperwork by streamlining the environmental review of future subsequent activities found to be within the scope of the program described in the Draft PEIR. In accordance with State CEQA Guidelines Sections 15168, 15162, and 15163, the District can approve the activity as being within the scope of the program covered by the Draft PEIR, and no new environmental impact analysis pursuant to CEQA would be required, if the District finds that: (1) no substantial changes to a project have occurred that would require major revisions of a previously certified PEIR due to the involvement of new significant environmental effects, or an increase in the severity of previously identified significant environmental effects; and (2) no substantial changes with respect to circumstances under which a project is undertaken have occurred that triggers major revisions to a previously certified PEIR due to the involvement of new significant environmental effects, or an increase in the severity of previously identified significant environmental effects; and (3) no new information of substantial importance exists, which was not known or could not have been known with the exercise of reasonable diligence at the time the previous PEIR was certified showing (a) new significant environmental effects from the project; or (b) significant effects will be substantially more severe than shown in the previous PEIR; (c) mitigation measures or alternatives previously found infeasible and rejected by a project proponent are now feasible and would reduce significant environmental effects; or (d) mitigation measures or alternatives which are considerably different from those previously analyzed and were rejected by a project proponent are identified and would reduce significant environmental effects. However, if any of the foregoing findings cannot be made or if it is determined that additional environmental review is required for future subsequent actions, these future projects, in accordance with State CEQA Guidelines Sections 15168 and 15152, may tier from this PEIR when preparing site-specific CEQA documents.

The proposed PMPU is a comprehensive update to the existing PMP to establish water and land uses on District Tidelands and guide future development and conservation over the approximately

30-year planning horizon. The PMPU identifies land use policies and delineates broad categories of uses on water and land use maps by planning district, which are further discussed in Chapter 3, *Project Description*, of this Draft PEIR. Consistent with the requirements of the California Coastal Act (CCA) and where known, the PMPU includes a list of appealable projects for associated planning districts that could be considered for future project-specific development. Importantly, however, the District is not proposing to approve and/or implement any specific projects with the PMPU. Because sufficient details regarding future projects of the PMPU are not available to facilitate a project-level impact analysis and because no approvals would be provided for specific development projects at this time, this Draft PEIR evaluates the potential physical changes to the environment associated with the PMPU at a programmatic level.

1.3 Background

The following sections describe the District, the San Diego Unified Port District Act (Port Act), the CCA, and the current PMP.

1.3.1 San Diego Unified Port District Act

The District was created with the Port Act,¹ adopted by the California State Legislature in 1962, as amended from time to time (see California Harbors and Navigation Code, Appendix 1). Consistent with the Public Trust Doctrine, the Port Act states that tidelands and submerged lands are to be used only for statewide public purposes and consistent with Section 87 of the Port Act. Section 87 enumerates the statewide purposes, including: for the use harbors, wharves, docks, piers, slips, quays and all other facilities used for the promotion of commerce and navigation; for all commercial and industrial uses and purposes; for the use of airport, heliport, and aviation facilities, and all other facilities for the promotion and accommodation of air commerce and air navigation; for the use of highways, streets, roadways, bridges, railroads, parking facilities, telephone and power lines, pipelines, and all other transportation and utility facilities for the promotion of any of the uses set forth in Section 87; for the construction and operation of public buildings, parks, meeting spaces, and other recreational spaces; and for the establishment of small harbors, marinas, and other recreational uses; and for the establishment and maintenance of those lands for open space, ecological preservation, and habitat restoration. Additionally, Section 19 of the Port Act requires the District Board of Port Commissioners (Board) to adopt a PMP for the use of tidelands and submerged areas conveyed to the District.

The mission of the District is to protect the resources in its jurisdiction, by providing economic vitality and community benefit through a balanced approach to maritime industry, tourism, water and land recreation, environmental stewardship, and public safety. To this end, the District is charged with management of the tidelands and diverse waterfront uses along San Diego Bay that promote commerce, navigation, fisheries, recreation, and ecological preservation on the Tidelands granted to the District by the Port Act. Section 19 of the Port Act requires the District to adopt a PMP for harbor and port improvement and for the use of all District Tidelands.

¹ Made available by the California State Lands Commission, found here: https://www.slc.ca.gov/programs/Granted_Lands/G10_San_Diego/G10-08_San_Diego_Unified_Port_District/S1962_Ch67.pdf. State of California. 1962. Statutes of California. Chapter 67. Approved May 8, 1962. The Port Act is hereafter incorporated in this Draft PEIR by reference.

The area of San Diego Bay encompassed by the historic mean high tide line amounts to approximately 14,951 acres of filled and submerged lands and an existing length of shoreline that measures approximately 54 miles (District 2020). These historic tideland areas are owned or controlled by the federal government, the State of California, local governments, and the District. The District is one of several governmental agencies with jurisdiction over the water and land areas of San Diego Bay. Specifically, the District has been granted approximately 5,483 acres, or about 37 percent, of the tidelands on San Diego Bay. This total includes the land covered by the San Diego International Airport (SDIA) that the District leases to the San Diego County Regional Airport Authority (approximately 675 acres). The District's land use jurisdiction does not include the SDIA, and therefore, approximately 5,129 total acres are within the District's water and land use jurisdiction. The shoreline frontage granted to the District amounts to approximately 33 miles, which is equivalent to 61.3 percent of the total San Diego Bay shoreline.

1.3.2 California Coastal Act

The CCA went into effect on January 1, 1977, and granted the California Coastal Commission (CCC) authority to review and approve land use plans and development located within the California coastal zone. The California coastal zone is defined in Section 30103(a) of the CCA as the water and land area of the State of California from the Oregon border to the border of the Republic of Mexico, depicted on maps identified and set forth in Section 17 of that chapter of the Statutes of the 1975-76 Regular Session enacting Public Resources Code Division 20 (i.e., the Coastal Act of 1976), extending seaward to the State's outer limit of jurisdiction, including all offshore islands, and extending inland generally 1,000 yards from the mean high tide line of the sea. In significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or 5 miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards.

Chapter 8 of the CCA (Sections 30700 to 30721) requires that certain port governing bodies, including the District, prepare and adopt a PMP. The draft PMP is then submitted to the CCC for certification, to show compliance with the CCA. Once the PMP is certified, a port district is then authorized to issue Coastal Development Permits (CDPs) or Coastal Act exclusions, as prescribed by the adopted PMP, for coastal zone development within its permitting jurisdiction. Chapter 8, Section 30702 of the CCA stipulates that port-related developments in port areas are not appealable to the CCC after certification of a PMP, except as otherwise provided in Chapter 8, Section 30715, which identifies the development categories that are appealable to the CCC, as follows:

1. Developments for the storage, transmission, and processing of liquefied natural gas.
2. Wastewater treatment facilities.
3. Roads or highways not for internal circulation within the port boundaries.
4. Office and residential buildings not for administrative activities of the port; hotels, motels, and shopping facilities not devoted to water-oriented commercial goods; commercial fishing facilities; and recreational small craft marina related facilities.
5. Oil refineries.
6. Petrochemical production plants.

Section 30714 states the CCC shall certify a PMP or portion of a PMP if it finds that the PMP or portion of a PMP: (1) conforms with and carries out the CCA policies of Chapter 8; and (2) where a PMP or portion thereof provides for any of the development categories listed above, that the development or developments in the categories conform to all the Chapter 3 policies of the CCA. Chapter 3 (Sections 30200 to 30265) outlines the coastal resource management policies, including those policies that apply to public access, recreation, the marine environment, land resources, and development.

1.3.3 Current Port Master Plan

Consistent with Section 19 of the Port Act, the Board adopted the first PMP in 1964. In 1972, an extensive master plan revision was completed with the adoption of a PMP amendment. Subsequent updates to the PMP occurred in 1975 and 1976. The latter amendment was adopted in response to the State Legislature's enactment of the CCA of 1976. The amended PMP conformed to the applicable provisions of that CCA.

The District's current PMP was certified by the CCC on January 21, 1981. It includes numerous subsequent PMP amendments that were approved by the District Board and certified by the CCC. The current PMP provides the official planning policies for the development of District Tidelands and is also the primary document that governs land and water uses within the District's jurisdiction. The current PMP is organized into four sections: (I) Introduction, (II) Planning Goals, (III) Master Plan Interpretation, and (IV) Precise Plans. Section II establishes planning goals and related policies that pertain to development and operation of water and land within the District's jurisdiction. Section III provides additional water and land use objectives and the criteria that apply to specific water and land use types, including commercial, industrial, recreation, conservation, military, and public facility uses. Section IV identifies 10 planning districts, each of which is guided by a Precise Plan that plans for future development. Section IV of the PMP also includes a list of appealable projects in each planning district.

1.4 District CEQA Documents Incorporated by Reference

According to Section 15150 of the State CEQA Guidelines, an EIR may incorporate by reference all or portions of another document, which is a matter of public record or is generally available to the public. Where all or part of another document is incorporated by reference, the incorporated language is considered to be set forth in full as part of the text of the EIR. Additionally, where an EIR uses incorporation by reference, the incorporated part of the referenced document can be briefly summarized where possible or briefly described if the data or information cannot be summarized.

The following District documents have been incorporated by reference into this Draft PEIR. Copies of these documents are available for inspection in the Office of the District Clerk, at the San Diego Unified Port District Administration Building, located at 3165 Pacific Highway, San Diego, CA 92101. Readers are also referred to the individual resource analyses in Chapter 4, *Environmental Analysis*, and to the references in Chapter 7, *References*, which provide additional documents incorporated by reference.

1.4.1 Tenth Avenue Marine Terminal Redevelopment Plan, Final Environmental Impact Report, and Addenda to the Final Environmental Impact Report

The Tenth Avenue Marine Terminal (TAMT) Redevelopment Plan (Redevelopment Plan) includes a variety of infrastructure investments that may be undertaken over the long term to accommodate an increase of the project site's capabilities and capacity. These include: (1) up to five gantry cranes; (2) additional and consolidated dry bulk storage capacity, which may include a new 100,000-square-foot dry bulk structure or an equivalent vertical storage facility; (3) enhancements to the existing conveyor system; (4) demolition of the molasses tanks and Warehouse C; (5) additional open storage space; (6) establishment of an on-dock rail facility; (7) a centralized gate facility; and (8) the demolition and Initial Rail Component, which includes a project-level analysis of the demolition of two underutilized transit sheds and on-terminal rail upgrades. The Demolition and Initial Rail Component was the necessary first step in modernizing the TAMT and would enable the subsequent implementation of the various development scenarios contemplated in the Redevelopment Plan.

The District prepared an EIR for the project analyzing the potential environmental impacts of the various improvements specified in the Redevelopment Plan. The Draft EIR was circulated for a 45-day public review period on June 30, 2016. Based on comments received during the public review period for the Draft EIR related to the air quality and greenhouse gas impacts of the project, District staff recommended approval of an alternative to the maximum practical capacity (MPC) throughput scenario analyzed within the June 2016 Draft EIR. This alternative throughput scenario is referred to as the Sustainable Terminal Capacity (STC) Alternative. The STC Alternative represents what the TAMT could handle on a regular basis without having to maximize all facilities concurrently as described in the MPC scenario. On December 13, 2016, the Board certified the Final EIR and adopted the STC Alternative and the Redevelopment Plan. As part of that certification, the Board approved the Mitigation, Monitoring, Reporting Program and the Statement of Overriding Considerations (Resolution 2016-200; UPD# EIR-2015-39; SCH# 2015031046; Clerk Document No. 66093).

Following certification of the Final EIR, modifications were made to the Demolition and Initial Rail Component during final design, including a larger on-terminal office facility and minor changes to other site-specific improvements. Because of these changes, the District prepared an Addendum to the Final EIR to analyze the potential environmental impacts of those modifications. The Addendum to the Final EIR determined that the proposed changes would not result in any new or more severe significant environmental effects. The Board adopted the Addendum to the Final EIR on July 11, 2017 (Resolution 2017-100; SCH# 2015-031046, Clerk Document Nos. 1136341, 113644, 113645, 113647). A Second Addendum to the Final PEIR was approved in April 2018 to implement and install a renewable microgrid to satisfy a portion of the mitigation requirements for the project's greenhouse gas impacts (Resolution No. 2018-061, SCH # 2015031046; Clerk Document No. 68288).

1.4.2 North Embarcadero Port Master Plan Amendment Project Final Environmental Impact Report

The District prepared a North Embarcadero Port Master Plan Amendment, which proposed an amendment to the PMP, to create a clear, simple, and consistent Port Master Plan for the North Embarcadero portions of the Embarcadero PD3 (North Embarcadero Subdistrict), through

modifications to the text, tables, and graphics. This plan is known as the North Embarcadero Alliance Visionary Plan or NEVP-Phase 1 (Clerk Document No. 57882) that included infrastructure improvements in the Phase I component, as well as the Coastal Access Features Project. Further improvements in the NEVP-Phase 1 Amendment generally included the addition of 1.5 acres of public waterfront park, a waterfront shuttle (the Circulator Shuttle), and the construction of a public plaza and/or park within a 150-foot wide setback from Harbor Drive on Lane Field. The North Embarcadero portion of PD3 encompasses the District's waterfront from the Laurel Street/North Harbor Drive intersection in the northwest to the (and including) the G Street Mole Park in the southeast. The Lane Field (1220 Pacific Highway) project was also approved by the Board as part of the NEVP-Phase 1 project. This project included a mixed use of hotel, retail, recreation, and office square footage.

On April 25, 2001, the District certified the Final Master EIR for the original NEVP (Resolution No. 2000-82; SCH#1999031037; Clerk Document No. 40610). That Draft EIR was originally circulated for a 45-day public review period between December 13, 1999, and January 26, 2000.

Subsequently, on July 7, 2009, the District adopted an Addendum to the 2000 Final Master EIR and the NEVP-Phase 1 Addendum (Resolution No. 2009-130; UPD#83356EIR; SCH# 9931037 [1999031037]; Clerk Document No. 55323) for the project analyzing the potential environmental impacts of the PMP Amendment. Although not required by CEQA, the Addendum was circulated for a 45-day public review period between February 6, 2009 and March 23, 2009.

On October 1, 2010, the District approved a Memorandum of Understanding among the District, the Lane Field San Diego Developers, LL1037C, and the San Diego Navy Broadway Complex Coalition. The District adopted a second Addendum and issued a CDP for the NEVP Phase I on January 11, 2011. This Addendum included a Mitigation and Monitoring Report (Resolution 2011-09; UPD# 83356EIR -351; SCH# 99031037 [1999031037]; Clerk Document No. 57060).

1.5 Scope and Content of the Draft Program Environmental Impact Report

As the CEQA lead agency, the District is responsible for determining the scope and content of this Draft PEIR, a process referred to as *scoping*. As part of the scoping process, the District considered the environmental resources present within its jurisdiction and the surrounding area and identified the potential environmental effects of the proposed project. On March 30, 2017, the District filed a Notice of Preparation (NOP) (Clerk Document No. 66681) with the County Clerk in accordance with Section 15082 of the State CEQA Guidelines. The NOP was mailed to public agencies, organizations, and other interested individuals to solicit their comments on the scope and content of the environmental analysis. The District also held a public scoping meeting on April 12, 2017, at the District's Administration Building at 3165 Pacific Highway, San Diego, CA, 92101.

Comments received in response to the NOP and during the public scoping meeting were used to inform the scope of this Draft PEIR. The comments are summarized in Table 1-1. Based on the District's preliminary evaluation of the potential effects of the proposed project and a thorough review of the comments on the NOP, the Draft PEIR analyzes effects associated with the following resources:

- Aesthetics and Visual Resources
- Air Quality and Health Risk
- Biological Resources
- Cultural Resources
- Geologic Hazards and Soils
- Greenhouse Gas Emissions and Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services and Recreation
- Sea Level Rise
- Transportation, Circulation, and Mobility
- Utilities and Service Systems

There are no agricultural, forestry, or mineral resources identified within the PMPU area; therefore, the proposed PMPU would not have an adverse effect on any of these resources. In addition, there are no wildfire hazard designated areas within or adjacent to the PMPU area; therefore, the proposed PMPU would not result in impacts related to wildfire. Chapter 5, *Additional Consequences of PMPU Implementation*, includes a brief analysis as to why impacts on agricultural, forestry, and mineral resources, as well as impacts related to wildfire, would not be significant.

1.5.1 Comments Received in Response to the Notice of Preparation and Areas of Controversy

A number of specific environmental issues were raised in the comments on the NOP. A brief summary of comments that pertain to the environmental scope of this Draft PEIR is provided in Table 1-1. Copies of the NOP and all NOP comment letters are provided as appendices to this Draft PEIR (Appendices A and B, respectively). These comments were considered by the District in the preparation of this Draft PEIR.

Table 1-1. Summary of NOP Comments Received

Commenter	Environmental Issue(s) Raised
Federal	
Federal Emergency Management Agency, Region 9, Gregor Blackburn, April 3, 2017	Review the current effective countywide Flood Insurance Rate Maps for the County of San Diego (Community Number 060284) and City of San Diego (Community Number 06029), May 16, 2012. The minimum, basic National Flood Insurance Program floodplain management building requirements are described in 44 Code of Federal Regulations 59 through 65.

Commenter	Environmental Issue(s) Raised
	<p>Summary of National Flood Insurance Program floodplain management building requirements.</p> <p>Contact the local community's floodplain manager for more information on local floodplain management building requirements.</p>
<p>National Oceanic and Atmospheric Administration National Marine Fisheries Service, Eric Chavez, May 1, 2017</p>	<p>The Draft PEIR should consider the marine resources under National Marine Fisheries Service jurisdiction known to be present within the project area (e.g., green sea turtles, essential fish habitat, and habitat areas of particular concern).</p>
State	
<p>State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit (SCH), March 30, 2017</p>	<p>Provides SCH# 2017031070 and notes which state agencies received a copy of the NOP.</p>
<p>Native American Heritage Commission (NAHC), Gayle Totton, April 5, 2017</p>	<p>Notes that CEQA was amended in 2014 to create a separate category for tribal cultural resources in CEQA Appendix G: Environmental Checklist Form.</p> <p>Notes the requirement to analyze impacts on tribal cultural resources as required under Assembly Bill (AB) 52 and indicates the tribal consultation requirements pursuant to Senate Bill (SB) 18 and AB 52.</p> <p>Recommends that lead agencies consult with all California Native American Tribes traditionally and culturally affiliated with the geographic area of the proposed PMPU.</p> <p>Summarizes the additional CEQA requirements added by AB 52 as well as other requirements.</p> <p>Summarizes the applicability and requirements of SB 18, and identifies the specific provisions included under SB 18.</p> <p>Provides NAHC recommendations for cultural resources assessments to avoid, preserve, and/or mitigate impacts on tribal cultural resources.</p>
<p>San Diego Regional Water Quality Control Board, Jeremy Haas, April 28, 2017</p>	<p>Recommends evaluation of alternatives that would measurably increase ecosystem integrity.</p> <p>Asks that the PEIR identify and characterize the current and anticipated habitats in tidal and subtidal areas within each planning district.</p> <p>The evaluation of potential impacts should rely on the most recent scientific estimates of sea level rise from the Ocean Protection Council.</p> <p>Alternatives that provide for migration of intertidal habitats may be the only way to preserve their existence under projected climate change scenarios.</p>
<p>California Department of Transportation, Kimberly Dodson, May 1, 2017</p>	<p>The Traffic Impact Study (TIS) should include all regionally significant arterial system segments and intersections, including State highway facilities where the proposed PMPU will add over 100 peak hour trips.</p> <p>State highway facilities experiencing noticeable delays should be analyzed in the TIS for projects that add 50 to 100 peak hour trips.</p> <p>The analysis should include the proposed Intermodal Transit Center and Interstate (I-) 5 direct connector ramps.</p>

Commenter	Environmental Issue(s) Raised
	<p>Focused analyses may be required for project trips assigned to State highway facilities experiencing significant delay and if there is an increased risk of potential traffic accidents.</p> <p>The TIS could consider implementing vehicle miles traveled (VMT) analysis into the modeling projections.</p> <p>Recommends coordinating early with relevant agencies including the San Diego Association of Governments (SANDAG), Metropolitan Transportation System (MTS), the cities of Chula Vista, National City, San Diego, and the CCC to determine modeling assumptions for the TIS.</p> <p>The TIS should address any increase in goods movement operations, and its impacts on State highway facilities.</p> <p>The data in the TIS should not be more than 2 years old.</p> <p>Encourages the District to include Transportation Demand Strategies into the PMPU.</p> <p>Identify in the PEIR where existing freight cargo facilities are located.</p> <p>If freight operations will change at the Working Waterfront, then identify where these operations will move or address how the change will be mitigated.</p> <p>Any direct and cumulative impacts on the State highway system should be eliminated or reduced below a level of significance pursuant to CEQA and National Environmental Policy Act (NEPA) standards.</p>
California Department of Fish and Wildlife, Craig Shuman, May 4, 2017	<p>Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a California Endangered Species Act (CESA) Incidental Take Permit.</p> <p>The Draft PEIR should include a full impact analysis of CESA-listed species and their habitats that may be in the project area.</p> <p>The Draft PEIR should include a full impact analysis of California Fully Protected Species that may be in the PMPU area.</p> <p>If a species can be shown to meet the criteria for Endangered, Rare, or Threatened as specified in the State CEQA Guidelines, it should be considered in the analysis for the PMPU.</p> <p>The analysis should include species of special concern that are known to the PMPU area or found in the California Native Diversity Database (CNDDDB) or the RareFind database, such as Western snowy plover. Impacts on this species and its habitat must be identified and avoided, and unavoidable impacts mitigated to a less-than-significant level.</p> <p>The Draft PEIR should include a discussion of the potential impacts on species of special concern that may occur within the various PMPU sites and alternative sites.</p> <p>The Draft PEIR should include a comprehensive discussion of the potential impacts on marine protected areas that may result from the PMPU.</p> <p>The Draft PEIR should provide a complete survey assessment of the flora and fauna within and adjacent to the PMPU area, with particular emphasis on rare, endangered, threatened, sensitive, and locally unique species and sensitive habitats.</p> <p>The Draft PEIR should identify habitats for endangered, threatened, and sensitive marine species, including those that are part of Federal and State fishery management plans.</p>

Commenter	Environmental Issue(s) Raised
	<p>Focused species-specific surveys are required, and a focused inventory of the rare, endangered, threatened, and sensitive species found within the areas of potential effects should be prepared.</p>
	<p>Specific impact analysis of marine habitats should be conducted for intertidal sand and mud flats, sand beaches, eelgrass beds, Olympia oyster beds, and saltmarsh, ponds, shallow intertidal, and subtidal habitats.</p>
	<p>The Draft PEIR should contain a complete discussion of the PMPU description, purpose, and need and the alternatives for buildings, dredging and dredge fill areas, shipping routes, anchorage areas, docks, and wharf improvements.</p>
	<p>The Draft PEIR should include alternatives that could be developed to avoid adverse impacts and losses of eelgrass, mud flats, sandy flats, salt flats, and shallow water habitats, and to fully avoid or minimize temporary impacts on marine species and birds.</p>
	<p>The Draft PEIR should identify potential construction and operational impacts on marine species, local resident and migratory species, and habitats.</p>
	<p>A discussion of potential adverse impacts from dredging, contaminants, filling, water turbidity, lighting, noise, human activity, spread or introduction of invasive species, and drainage should be included.</p>
	<p>An analysis of indirect PMPU impacts on biological resources of nearby open Bay waters, adjacent eelgrass and subtidal habitats, sandy beach, and intertidal ecosystems should be conducted.</p>
	<p>Impacts on wildlife corridor/ movement areas, including access to undisturbed habitats in adjacent waters, intertidal flats, and upland areas should be evaluated.</p>
	<p>The Draft PEIR should include a comprehensive discussion identifying potential mitigation areas and measures to fully mitigate any unavoidable significant impacts on habitat and species.</p>
	<p>For proposed preservation and/or restoration, the Draft PEIR should include measures to perpetually protect the targeted habitat values from direct and indirect negative impacts. Issues that should be addressed include access restrictions, proposed shallow water and intertidal habitat dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased human intrusion.</p>
	<p>The PEIR should include a discussion of possible conflicts associated with zoning of areas for development projects or other uses that are nearby or adjacent to natural areas that may contribute to wildlife-human interactions and introduction of nonnative species.</p>
	<p>General and specific plans, as well as past, present, and anticipated future projects should be analyzed relative to their cumulative impacts on fish and wildlife habitats.</p>
	<p>The Draft PEIR should include a discussion of sound impacts associated with underwater construction activities, as well as a discussion of sound pressure level monitoring for in water work if applicable.</p>
	<p>The Draft PEIR should include a discussion of measures to avoid impacts on nesting birds.</p>

Commenter	Environmental Issue(s) Raised
Regional	
San Diego Gas & Electric (SDG&E), Hilary Haskell, April 28, 2017	Any relocations or alterations to SDG&E facilities that may be required must be addressed in the Draft PEIR.
San Diego Association of Governments, Katie Hentrich, Seth Litchney, May 1, 2017	<p>Include a discussion of impacts and mitigation measures associated with traffic congestion on nearby and surrounding streets, including but not limited to the I-5 connections and improvements, Pacific Highway, Hawthorne Street, Grape Street, Harbor Drive, Silver Strand Boulevard, and other arterials and streets.</p> <p>Consider potential impacts on goods movement on I-5, Harbor Drive, and Bay Marina Drive in relation to the Working Waterfront and National City Bayfront districts, and all multimodal facilities and local communities within the planning districts.</p> <p>Consider the integration of Transportation Demand Modeling (TDM) strategies to help reduce greenhouse gas (GHG) emissions associated with single-occupancy vehicle trips.</p>
Local	
City of San Diego (City) Planning Department, Kurtis Steiner, May 1, 2017	<p>The Draft PEIR should address how the proposed Mixed-Use Overlay for the Convention Center site would impact the Phase II expansion of the Convention Center and the existing Convention Center, such as coastal access, truck loading, and resulting traffic, noise, air quality, GHG emissions, and public views.</p> <p>A separate land use under the Commercial land use category titled “Convention Center” provides a clearer understanding of the intended use and allows for a more defensible environmental analysis within the Draft PEIR.</p> <p>Include a discussion of the Convention Center expansion should it occur outside of the District Tidelands in the cumulative condition.</p> <p>A TIS, or mobility and circulation analysis, should compare the impacts of the PMPU against existing conditions and future 2035 and 2050 traffic demand.</p> <p>Include analysis of vehicular circulation from District lands to I-5 and State Route (SR-) 15 within the City of San Diego.</p> <p>Address the traffic impacts of the proposed PMPU, including a plan-to-ground comparison, comparing existing conditions to projected traffic in years 2035 and 2050 with the PMPU.</p> <p>Address how vehicle traffic (cars and freight trucks) associated with the PMPU would affect at-grade rail crossings and operations in the rail corridor for existing, 2035, and 2050 vehicle and rail traffic conditions, including any additional future rail operations from the proposed project.</p> <p>Identify City street and roadway improvement measures to mitigate the PMPU’s traffic impacts based on future 2035 and 2050 traffic demand.</p> <p>Address freeway and ramp improvement measures to mitigate PMPU traffic impacts based on future 2035 and 2050 traffic demand, including direct truck access roads from Harbor Drive to I-5 and/or SR-15.</p> <p>Address transit priority strategies to mitigate potential impacts on transit services in 2035 and 2050.</p>

Commenter	Environmental Issue(s) Raised
	Address transit improvements to and from the Cruise Ship Terminal to increase transit ridership and reduce 2035 and 2050 traffic impacts along Harbor Drive.
	Address how the proposed PMPU would impact existing and planned bicycle and pedestrian facilities within City rights-of-way.
	Address if any mitigation measures would require the City to amend the Circulation Element of an affected community plan, public facilities financing plan, or impact fee study.
	Address TDM strategies to mitigate future 2035 and 2050 traffic impacts.
	Address intelligent transportation system strategies to mitigate future 2035 and 2050 traffic impacts.
	Provide a Transportation Improvements Phasing Plan for the required transportation mitigation measures based on the traffic need and existing right-of-way constraints.
	Consider the methods and strategies proposed in the City's Climate Action Plan (CAP) for reducing GHG emissions and, where feasible, incorporate design and operational mitigation measures for future projects.
	Address both roadway and rail noise associated with port traffic and operational noise that could affect sensitive noise receptors for existing, 2035, and 2050 conditions.
	Determine if the proposed PMPU would expose sensitive receptors to substantial pollutant concentrations within the PMPU area and surrounding community plan areas.
	Address how any future structures that could result from the PMPU would impact view corridors within the PMPU area and surrounding community plan areas.
	Address how the proposed PMPU would affect existing and future visual character or quality of the PMPU area and surrounding community plan areas.
	Address how the proposed PMPU would affect existing and future land uses within surrounding community plan areas.
	Address how the proposed PMPU would affect existing and future public facilities within surrounding community plan areas.
	Address how the proposed PMPU would affect existing and future population-based parks within surrounding community plan areas.
	Include an analysis of how the proposed PMPU would affect coastal access plans adopted by the City for surrounding communities.
	Coordinate with City Storm Water Division to assure potential impacts on City stormwater infrastructure are addressed.
	Establish a framework assuring that environmental reviews for subsequent projects potentially affecting City drainage systems fully address drainage facility capacity, operation, and maintenance.
	Address potential effects of air emissions on water quality. Through aerial deposition, certain pollutants may have the potential to be transported by stormwater runoff.
	Include potential stormwater impacts when considering infrastructure improvements such as roadway modifications.

Commenter	Environmental Issue(s) Raised
	Note that new stormwater drainage facilities or the expansion or modification of existing drainage facilities may be tidally influenced.
Organizations	
San Diego County Archaeological Society, Inc., James W. Royle, Jr., April 8, 2017	Pleased that cultural resources are to be evaluated in Draft PEIR and looking forward to reviewing during public comment period. Request to be included on Draft PEIR distribution list and to be provided with a copy of any cultural resources technical reports.
Southwest Wetlands Interpretative Association, Mike McCoy, Bill Tippetts, April 28, 2017	<p>The Draft PEIR must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change.</p> <p>Essential that the PMPU describes a reasonable range of alternatives, which should include alternatives to the goals and land use maps.</p> <p>The Draft PEIR must clearly identify and provide as much information as possible about future appealable and non-appealable projects so the public can understand the scope of potential impacts and determine sufficient mitigation.</p> <p>The District's various adopted natural resource plans/documents that address environmental resources and Federal and State regulations should be used to establish significance thresholds and be addressed in the PEIR.</p> <p>The PEIR must fully analyze the potential direct and indirect environmental impacts on the five adjacent cities from future District projects.</p> <p>How the PMPU lays out principles and guidelines for maintaining the Bay's aesthetics will greatly affect whether a proposed project can avoid or mitigate project impacts.</p> <p>The PMPU should provide guidance for conserving and restoring sensitive Bay habitats and minimizing further impacts.</p> <p>New information regarding the linkage between the Rose Canyon Fault and the Newport-Inglewood Fault must be included in the Draft PEIR's evaluation of impacts, as it could dictate the types and locations of future projects.</p> <p>Concerned about how the PMPU will address GHG emissions from its facilities and tenants. The PMPU should review and have similar goals as the San Diego Regional Airport Authority to reduce overall energy by 30% and transition supply to 100% green energy.</p> <p>The effects of sea level rise on flood hazards, tsunami threats, water circulation, and water quality in conjunction with foreseeable projects under the PMPU must be fully analyzed.</p> <p>Concerned that the PMPU could allow developments that conflict with or constrain related developments and infrastructure in adjacent member cities.</p> <p>Adopted resource plans of local, state, and federal jurisdictions must be addressed in relation to future projects that could be implemented under the PMPU.</p> <p>Effects of excessive noise on sensitive and threatened bird species and wildlife should be analyzed in the Biological Resources section.</p> <p>The PMPU must provide sufficient specificity regarding the anticipated future projects to allow the Draft PEIR to serve as a tiering EIR for processing those projects.</p>

Commenter	Environmental Issue(s) Raised
Environmental Health Coalition, Joy Williams, May 1, 2017	<p data-bbox="553 239 1349 296">Recommends that environmental justice and greenhouse gas emission policies be included in all planning elements.</p> <p data-bbox="553 310 1406 367">If no project list is included in the PEIR, plausible worst-case scenarios for all land and water uses must be developed that can be used for the analysis.</p> <p data-bbox="553 382 1406 438">The PMPU description should include all known and foreseeable appealable and non-appealable projects.</p> <p data-bbox="553 453 1406 541">The air quality study should be based on a plausible worst-case scenario for land and water development and include identification of hot spot impacts and regional impacts.</p> <p data-bbox="553 556 1406 613">Recommends that the threshold for particulate matter, ozone, and toxic air contaminant emissions should be set at no net increase.</p> <p data-bbox="553 627 1321 655">Provides recommended mitigation measures for air quality impacts.</p> <p data-bbox="553 669 1406 697">GHG analysis should be based on worst-case analysis of potential emissions.</p> <p data-bbox="553 711 1406 800">Thresholds of significance for GHGs should be based on the State's GHG emissions reduction targets set by SB 32, and emissions above these targets should be considered significant.</p> <p data-bbox="553 814 1256 842">Provides recommended mitigation measures for GHG impacts.</p> <p data-bbox="553 856 1360 945">Analyze sea level rise impacts that could result in hazardous materials entering San Diego Bay or neighboring communities from the industrial waterfront.</p> <p data-bbox="553 959 1398 1047">Recommends recommitment to adhering with District Policy 725, the Transition Zone Policy, as a mitigation measure that reduces potential land use plan conflicts.</p> <p data-bbox="553 1062 1393 1119">Recommends that the Draft PEIR analyze nighttime and daytime noise and impacts on workers on Tidelands.</p> <p data-bbox="553 1134 1398 1251">The District should adopt the City's noise standard for noise at homes and schools without averaging noise standards for two adjoining zoning types. The District should also adopt the City's noise standard of 40 to 50 decibels (dB) for residences.</p> <p data-bbox="553 1266 1398 1323">Suggest that one mitigation measure for population and housing impacts is to maximize local hire of workers who are already in the area.</p> <p data-bbox="553 1337 1333 1425">States that recreation facilities must be low cost and accessible to all, including transit-dependent people, to address environmental justice impacts.</p> <p data-bbox="553 1440 1414 1528">Transportation impact analysis should include estimates of VMT and not just congestion/level of service (LOS) impacts, as well as parking impacts on adjacent communities.</p> <p data-bbox="553 1543 1341 1600">Include mitigation for biking and walking hazards, such as Class I bike routes and walking routes separated from traffic.</p> <p data-bbox="553 1614 1390 1671">Recommends a Harbor Drive haul road to separate truck traffic on Harbor Drive from other traffic as mitigation for this impact.</p> <p data-bbox="553 1686 1406 1743">Utilities analysis must include worst-case analysis, including high water use projects and continuing drought.</p> <p data-bbox="553 1757 1390 1814">Anticipated impacts of climate change such as increased heat and drought should be factored into the utilities analysis.</p> <p data-bbox="553 1829 1406 1885">Recommends mitigation that requires energy generation and/or storage for new projects that will increase energy use.</p>

Commenter	Environmental Issue(s) Raised
Citizens Coordinate for Century 3, Roger Lewis, May 1, 2017	<p>There are possible and/or pending projects that could significantly affect the environmental impacts of development within the District’s planning districts. These could result in significant environmental impacts that would not be analyzed in this PEIR.</p> <p>The PMPU description of the PEIR should make it clear that the PEIR is focusing on the overall program objectives and that individual projects such as the Seaport Village Development would require their own EIR.</p> <p>There are land use decisions that could impact the environment that are not part of the EIR process, such as the long-term plans for the location of parking on the waterfront.</p> <p>Potential “other agency projects” should be integrated into the PEIR analyses. To the extent there are specifics identified by project applicants they should be incorporated into the environmental review.</p> <p>The PEIR should consider a broad range of alternatives for development of key District properties including the B Street Pier.</p> <p>The PEIR should analyze impacts at a programmatic level but must identify projects in sufficient detail to allow for future streamlining of projects.</p>
Climate Action Campaign, Sophie Wolfram, May 1, 2017	<p>The baseline for GHG emissions should reflect the best available data on existing conditions; business as usual projections should not be used as a baseline.</p> <p>The thresholds of significance for GHGs should be any level of emissions that will cause a violation of the State’s GHG emissions reductions targets of 40% below 1990 levels by 2030. Emissions above targets should be considered significant.</p> <p>Recommends that the District utilize a CAP as mitigation for GHG impacts, which would require the District to update the document to be legally binding with enforceable measures leading to reductions in line with State goals.</p> <p>The District’s current targets of 10% emissions reductions below 2006 levels by 2020 and 25% by 2035 set forth in the CAP do not track the State’s reduction targets. The CAP should be updated with new targets in line with State goals.</p> <p>If the CAP is mitigation it must mitigate emissions through the planning horizon of the PMPU.</p> <p>Recommends that mitigation measures planned as strategies in the CAP include electrification of cargo-handling and other equipment, hybrid or other clean technologies for equipment, and on- and offsite clean energy.</p> <p>Suggests that the air quality analysis be based on a plausible worst-case scenario for land and water development.</p> <p>The Draft PEIR must address sea level rise through the life of the plan.</p>
Cleveland National Forest Foundation and Save Our Forest and Ranchlands, Duncan McFetridge, May 1, 2017	<p>The impact analysis requires recognition of the current state of transit and rail freight in the downtown area in which the port infrastructure is situated.</p> <p>Recommends five studies that should be reviewed and considered to implement a functional transit system: The Independent Transit Planning Review, Urban Area Transit Strategy, Destination Lindbergh, LOSSAN Draft EIR, and the Complete Mobility Plan.</p>

Commenter	Environmental Issue(s) Raised
	The LOSSAN Corridor Draft EIR is especially pertinent to the PMPU PEIR in relation to Port movement of goods and cargo.
San Diego Convention Center Corporation, Clifford Rippetoe, May 1, 2017	Concurs with and shares the concerns identified by the various departments in the City of San Diego's letter dated May 1, 2017.
San Diego County Regional Airport Authority, Ted Anasis, AICP, May 1, 2017	<p>Any land uses changes/ intensifications proposed within the Airport Influence Area should take into account the proximity of the airport and consider consistency with the allowed uses delineated in the Airport Land Use Compatibility Plan (ALUCP).</p> <p>The Draft PEIR should include analyses of the circulation and traffic impacts, including cumulative impacts on the streets that serve PD2 and PD3, as they also serve the airport.</p> <p>Any potential uses that increase the demand for vehicle use and parking at and surrounding the airport should be identified and describe how the demand for parking will be served.</p> <p>The PEIR should consider the cumulative impacts of the proposed next phase of the Airport Development Plan.</p> <p>Coordinate with the San Diego County Regional Airport Authority to ensure that the data and analyses in the PEIR is accurate and that no conflict between the Airport Development Plan and PMPU would occur.</p>
Save Everyone's Access, Scott Andrews, May 8, 2017	<p>The Draft PEIR should quantify the acreage of all major parks, public piers, fishing, small craft, waterside access, public parking, and Bay viewshed impacts.</p> <p>Mitigation for loss of park space should occur on an acre for acre basis. Any park mitigation acreage should avoid the health impacts of air and noise pollution near Lindbergh Field and idling traffic at the North Harbor Drive/Grape Street intersection.</p> <p>The Draft PEIR should quantify and mitigate significant tideland loss to privatization.</p>
Citizens Coordinate for Century 3, John Lomac, February 1, 2012	No environmental issues raised.
Individuals	
Interested Party, Donald Wood, April 12, 2017	<p>Distinguish between <i>program</i> and <i>project</i> in the PEIR as it relates to the PMPU and future development projects.</p> <p>Treat the PMPU process as a program and plan on developing future project EIRs for individual Bayfront projects. Indicate in the Draft PEIR which proposed future activities and development will get project EIRs for each district.</p> <p>Detail how the District plans to coordinate planned actions in compliance with its adopted CAP.</p> <p>Detail projected reductions in VMT and reductions in GHG emissions as the PMPU is implemented.</p> <p>Suggests refining vision, developing concrete long-term goals, and indicating where future projects will be located in the PMPU.</p> <p>Requests making preservation and enhancement of public access to the Bayfront and shorelines a priority.</p>

Commenter	Environmental Issue(s) Raised
	<p>Recommends assuming that all future proposed projects will be appealable to the CCC.</p>
	<p>Suggests that the Draft PEIR detail how the District anticipates working with the U.S. Navy, CCC, California State Lands Commission, the airport, and each of the neighboring cities.</p>
<p>Interested Party, Donald Wood, April 30, 2017</p>	<p>Clarify how staff is using <i>program</i> and <i>project</i> within the context of its planning efforts, enabling legislation, and complying with CEQA and the Coastal Act. Explain how the program and individual project planning and zoning help to achieve the Board's long-term vision.</p>
	<p>The Draft PEIR should indicate which proposed future redevelopment projects will get individual project EIRs in each district.</p>
	<p>The Draft PEIR should detail how the District proposes to coordinate its planning actions in a manner that fully complies with state law and its updated CAP.</p>
	<p>The Draft PEIR should detail projected reductions in VMT and projected reductions in GHG emissions the District plans to achieve for each planning district and proposed future project.</p>
	<p>The Draft PEIR should detail how the District plans to work with the Navy, CCC, California State Lands Commission, airport, and each of its surrounding member cities.</p>
	<p>The Draft PEIR should examine the impacts on public access and viewsheds of the harbor from potential future hotel projects.</p>
	<p>The Draft PEIR should examine the benefits and liabilities of expanding the San Diego Maritime Museum's use of the Embarcadero.</p>
	<p>As part of the Draft PEIR process, the District should analyze where cruise ships should be berthed around the Bay in the future. The analysis should include the following alternatives: status quo, Convention Center lagoon pier expansion, and moving the cruise ship terminal to Harbor Island.</p>
	<p>The Draft PEIR should evaluate the positive economic and environmental effects that could be achieved by expanding the current ferry system to provide regular commuter trips to and from downtown.</p>
	<p>The Draft PEIR should examine potential GHG and VMT reductions from creating new ferry landings at Harbor Island, the Naval Training Center, and Seaport Village.</p>
	<p>The Draft PEIR should analyze the environmental effects undergrounding all future tidelands parking would have on increasing developable properties, public access, and the environment.</p>
	<p>The Draft PEIR should limit proposed mitigation measures to public tidelands under jurisdiction of the District and within the same planning district where impacts would occur, where possible.</p>
	<p>The Draft PEIR should analyze potential impacts on harbor ships and boat traffic when considering any new piers or docking facilities.</p>
	<p>The Draft PEIR should analyze the environmental impacts of expanding parking on Navy Pier and continuing to use it for museum visitor parking rather than obtaining upland parking. The analysis should identify impacts on air quality and traffic around the Embarcadero.</p>

Commenter	Environmental Issue(s) Raised
	The Draft PEIR should look at the potential benefits and environmental impacts of zoning the west end of Shelter Island for park land versus construction of a small hotel.
	The Draft PEIR should analyze the environmental and other effects and benefits of creating linear parking along the east side of Harbor Drive from Broadway to Hawthorne Street versus leaving a gap on the western end of the Wyndham Hotel.
	The Draft PEIR should identify and examine the negative impacts on Barrio Logan from truck traffic associated with the Tenth Avenue Marine Terminal and examine alternative transportation mechanisms to reduce the negative impacts on the neighborhood.
Interested Party, Bill Tippets, May 1, 2017	No environmental issues raised.

1.6 Organization of the Draft Program Environmental Report

The content and format of this Draft PEIR are designed to meet the requirements of CEQA and the State CEQA Guidelines. Table 1-2 summarizes the organization and content of the Draft PEIR.

Table 1-2. Document Organization and CEQA Requirements

Draft PEIR Chapter	Contents
<i>Executive Summary</i>	Includes a brief summary of the proposed PMPU; identifies each significant effect, including proposed mitigation measures and alternatives to reduce or avoid the effect; identifies the areas of controversy known to the lead agency, including issues raised by agencies and the public; and summarizes the issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects (State CEQA Guidelines Section 15123).
Chapter 1 <i>Introduction</i>	Discusses the purpose of CEQA and this Draft PEIR, the scope and content of this Draft PEIR, the documents incorporated by reference into this Draft EIR, the organization of this Draft PEIR, and comments received on the Notice of Preparation of this Draft PEIR (State CEQA Guidelines Section 15124(d)).
Chapter 2 <i>Environmental Setting</i>	Describes the overall existing physical conditions in the vicinity of the proposed PMPU when the analysis was initiated. In addition, the specific existing setting/conditions for each resource area are described in the applicable resource section in Chapter 4, <i>Environmental Analysis</i> (State CEQA Guidelines Section 15125).
Chapter 3 <i>Project Description</i>	Contains both a map of the precise location and boundaries of the proposed PMPU and its location relative to the region; lists the proposed PMPU's central objectives, underlying purpose, as well as PMPU benefits; provides a detailed description of the proposed PMPU's characteristics, and the intended uses for this Draft PEIR, including a list of the agencies that expect to use this Draft EIR and a list of permits and other approvals

Draft PEIR Chapter	Contents
	required to implement the proposed PMPU (State CEQA Guidelines Section 15124(a), (b), and (c)).
Chapter 4 <i>Environmental Analysis</i>	Describes the existing physical conditions for each resource area; lists the laws and regulations germane to the specific resource; describes the impact assessment methodology; lists the criteria for determining whether an impact is significant; identifies the direct, indirect, and cumulative significant impacts on the environment that would result from implementation of the proposed PMPU and PMPU options; and lists proposed mitigation measures that would avoid or reduce the identified significant impacts (State CEQA Guidelines Sections 15125–15126.4).
Chapter 5 <i>Additional Consequences of PMPU Implementation</i>	Discusses the way the proposed PMPU could foster economic or population growth, either directly or indirectly, in the surrounding environment; describes the significant irreversible changes associated with the proposed PMPU's implementation; and provides a brief discussion of the environmental resource impacts that were found to be not significant during preparation of this Draft PEIR (State CEQA Guidelines Sections 15126.2(c) and (d), 15127, and 15128).
Chapter 6 <i>Alternatives to the Proposed PMPU</i>	Describes a reasonable range of alternatives to the proposed PMPU, including the No-Project Alternative; compares and contrasts the significant environmental impacts of alternatives to the proposed PMPU; and identifies the environmentally superior alternative (State CEQA Guidelines Section 15126.6).
Chapter 7 <i>List of Preparers and Agencies Consulted</i>	Lists the individuals and agencies involved in preparing this Draft PEIR (State CEQA Guidelines Section 15129).
Chapter 8 <i>References</i>	Provides a comprehensive listing by chapter of all references cited in this Draft PEIR, including documents incorporated by reference (State CEQA Guidelines Sections 15148 and 15150).
Acronyms and Abbreviations	A list of acronyms and abbreviations is provided for the reader's reference immediately following the list of tables and figures in the Table of Contents.
Appendices	Presents additional background information and technical detail for several of the resource areas (State CEQA Guidelines Section 15147).

2.1 Introduction

This chapter describes the physical environment in the proposed Port Master Plan Update (PMPU) vicinity, from both a local and regional perspective, as it existed at the time the Notice of Preparation (NOP) was published on March 30, 2017 (Clerk Document No. 66681). Resource-specific conditions are provided within each resource section of Chapter 4, *Environmental Analysis*, which also describes any inconsistencies with applicable plans.

2.2 Existing Setting

This section provides a general overview of the existing environmental setting (or “baseline”) for the proposed PMPU. For an EIR, the “Environmental Setting” is controlled by State CEQA Guidelines Section 15125 which states in part:

An EIR must include a description of the physical environmental conditions in the vicinity of the project. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to provide an understanding of the significant effects of the proposed project and its alternatives. The purpose of this requirement is to give the public and decision makers the most accurate and understandable picture practically possible of the project’s likely near-term and long-term impacts. (1) Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project’s impacts, a lead agency may define Existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record.

The State CEQA Guidelines and case law recognize that the date for establishing an environmental baseline cannot be rigid (see State CEQA Guidelines Sections 15146, 15151, and 15204). As noted above, the NOP was published in March 2017. In some instances, information is presented in the environmental setting that differs from the precise time of the NOP. Environmental conditions may vary from year to year, and in some cases, it is necessary to consider conditions over a range of periods. Furthermore, environmental conditions for 2020 and 2021 were generally affected by the COVID-19 pandemic, which caused a lull in activity. The baseline conditions relevant to the resource areas being analyzed are described within each specific resource area in Chapter 4.

2.2.1 Location

As shown on Figure 2-1, the proposed PMPU encompasses the lands, tidelands, and submerged lands under the San Diego Unified Port District's (District's) jurisdiction adjacent to the cities of Coronado, Imperial Beach, and San Diego.

2.2.2 Surrounding Conditions

The City of Chula Vista is the second-largest city in San Diego County and contains an area of approximately 52 square miles and a population of approximately 274,000 residents (U.S. Census 2019a). Chula Vista is 7.5 miles from downtown San Diego and 7.5 miles from the U.S.-Mexico border. Chula Vista is bordered by the following: (1) on the north by the City of National City and the unincorporated community of Bonita; (2) also on the north and east by the unincorporated areas of San Diego County; (3) on the south by the City of San Diego; and (4) on the west by San Diego Bay.

Across San Diego Bay from downtown San Diego, the City of Coronado encompasses nearly 14 square miles with approximately 24,000 residents (U.S. Census 2019b). Coronado is bordered on the north and east by San Diego Bay (and the City of San Diego beyond that), and on the south by the City of Imperial Beach, which connects to Coronado via the narrow strip of land known as the Silver Strand, which is within the incorporated area of Coronado. Coronado is also connected to the City of San Diego via the Coronado Bridge (part of State Route 75), which connects downtown San Diego to the east side of Coronado. The Pacific Ocean borders Coronado to the west.

The City of Imperial Beach is a beach community in the southwestern-most corner of the continental United States and San Diego County. It is bordered on the north by the City of Coronado and San Diego Bay, on the east by the City of San Diego, on the west by the Pacific Ocean, and on the south by the U.S.-Mexico border. It encompasses approximately 4.5 square miles with a population of approximately 27,000 residents (U.S. Census 2019c).

The City of National City is 5 miles south of downtown San Diego, along San Diego Bay, and 10 miles north of the U.S.-Mexico border. National City is bordered by the City of San Diego to the north and east, the City of Chula Vista to the south, the unincorporated areas of Lincoln Acres and Bonita to the south and southeast, and San Diego Bay to the west. National City comprises approximately 9.2 square miles and has an estimated population of approximately 61,000 residents (U.S. Census 2019d).

The City of San Diego, which is the largest city in the region, covers approximately 323 total square miles and is home to an estimated population of approximately 1.42 million residents (U.S. Census 2019e). Downtown San Diego is approximately 13 miles north of the U.S.-Mexico border, and the northern portion of the city is bordered on the north by the cities of Del Mar and Poway and unincorporated San Diego County land; on the east by the cities of Santee, El Cajon, La Mesa, and Lemon Grove, and unincorporated County of San Diego land; on the south by the City of National City; and on the west by the Pacific Ocean. Additionally, the City of San Diego's jurisdiction includes an approximately 34-square-mile area in south San Diego County, which is bordered on the north by the City of Chula Vista, on the east by unincorporated San Diego County, on the south by the U.S./Mexico border, and on the west by the City of Imperial Beach. The neighborhoods of the City of San Diego that are in the vicinity of the planning area include Point Loma to the north (adjacent to Shelter Island); downtown San Diego, which includes Little Italy (adjacent to Harbor Island and

North Embarcadero); Barrio Logan, which is south and east of the South Embarcadero; and a portion of Otay Mesa-Nestor located in South Bay.

In addition to these municipalities, the U.S. Navy and Coast Guard own large areas of land and water within and adjacent to the PMPU area. Naval Base San Diego, located south of downtown San Diego and west of National City, is the principal homeport of the Pacific Fleet. Naval Base San Diego comprises over 1,600 acres of land and 326 acres of water and is also responsible for the Commander, Navy Region Southwest, and Naval Facilities Engineering Command Southwest headquarters in downtown San Diego. Other Navy facilities in the surrounding area include the U.S. Naval Training Center San Diego, U.S. Naval Radio Station Imperial Beach, U.S. Naval Amphibious Base Coronado, and the U.S. Naval Air Station North Island. U.S. Coast Guard Sector San Diego is located in downtown San Diego along the San Diego Bay, south of San Diego International Airport, and encompasses approximately 18 acres.

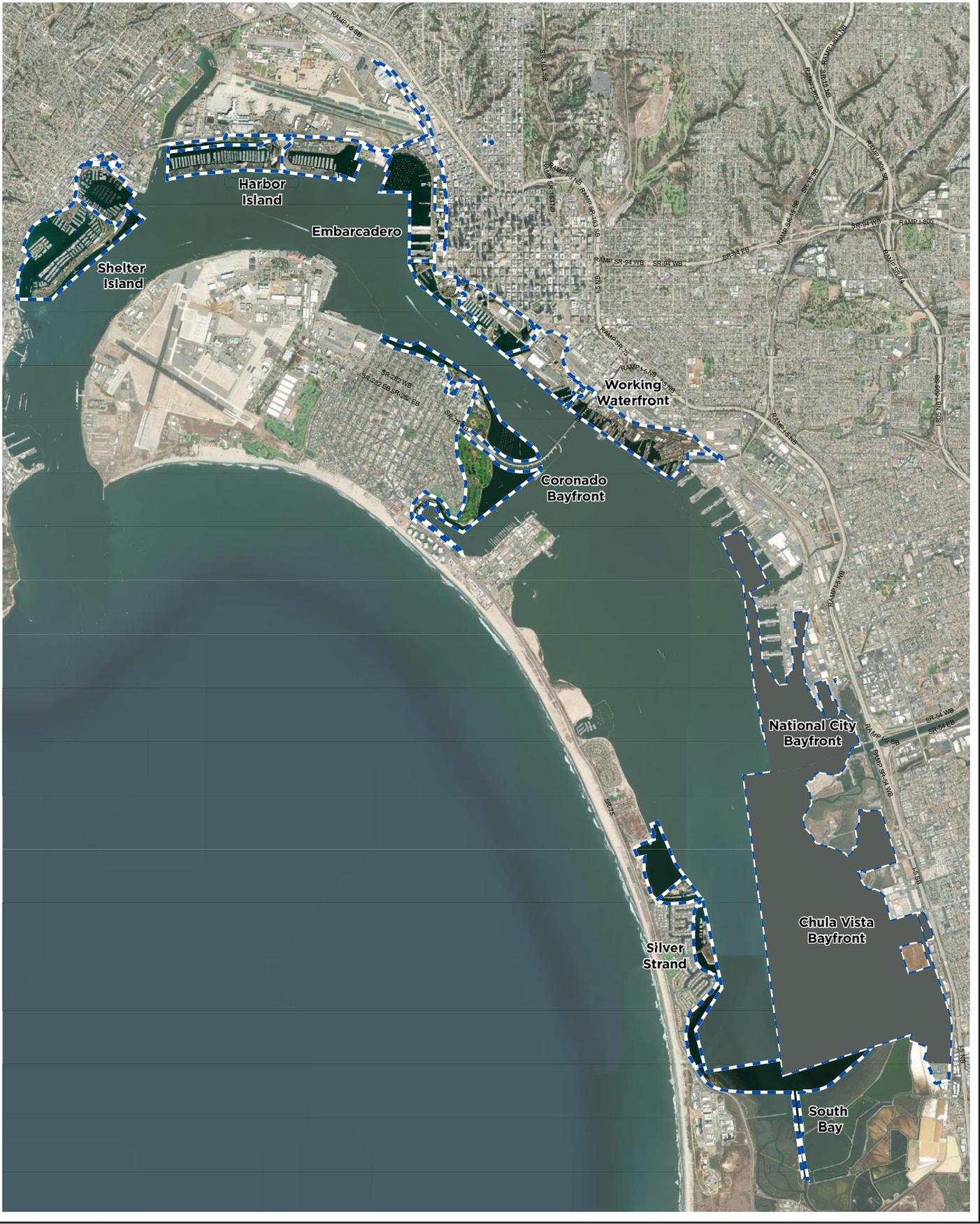
2.2.3 Existing Conditions

The District's jurisdiction covers 10 planning districts (individually, PD, and collectively, PDs) each with a distinctive character. The following discussion briefly describes the existing physical conditions present within each PD, as well as in the vicinity of each. As detailed below, the PMPU area is within a highly urbanized area and contains an intense development pattern with a variety of uses. As discussed further in Chapter 1, *Introduction*, PD5, National City Bayfront, and PD6, Chula Vista Bayfront, and the Pond 20 portion of PD7, South Bay, are not part of the proposed PMPU, as no changes to those planning districts are proposed by the PMPU. Therefore, PD5, PD6, and the Pond 20 portion of PD7, are not analyzed in this Program Environmental Impact Report (PEIR). Specific details related to the existing conditions or baseline setting, for each resource area, are provided within the *Environmental Setting* of each section of Chapter 4.

The District's current Port Master Plan (PMP) was certified by the California Coastal Commission (CCC) on January 21, 1981, and includes numerous subsequent amendments that were approved by the District and certified by the CCC. The PMP provides the official planning policies for the development of District Tidelands and is also the primary document that governs land and water uses within the District's jurisdiction.

To improve the accuracy and precision of jurisdictional data in this PEIR, such as the acreages of the water and land use designations and the 10 planning districts, the certified PMP designations were converted from the hand-prepared paper maps included in the certified PMP, to digitized geographic information system (GIS) data, which allowed for more refined and accurate acreage measurements. The District used this data to modernize its geospatial maps and data. This GIS conversion led to refinements in the number of acres, within the water and land use designations and the 10 planning districts. Table 2-1 demonstrates the acreage per designation identified within the certified PMP and the GIS conversion. While the certified PMP includes designations of certain water areas (primarily assigned Navigation Corridor or Anchorage designations) that are managed by the California State Lands Commission, the acreage for those designations are not included in the total acreage tables in the certified PMP or in Table 2-1.

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Source: Port of San Diego, 2020.



Figure 2-1
Project Location
Port Master Plan Update

Table 2-1. Certified Port Master Plan Water and Land Use Designations

Designations	Existing Acres included in Certified Port Master Plan	Existing Acres from GIS Conversion of Designations
Water Use		
Commercial Fishing Berthing	18.8	25.38
Marine Services Berthing	17.7	16.69
Sportfishing Berthing	11.1	10.67
Recreational Berthing	287.0	282.18
Specialized Berthing	153.1	153.52
Terminal Berthing	33.5	28.85
Open Bay/Water	677.7	665.39
Estuary	117.4	116.41
Harbor Services	10.5	10.20
Boat Navigation Corridor	110.8	105.63
Ship Navigation Corridor	15.1	13.38
Boat Anchorage	25.0	30.87
Ship Anchorage	24.2	27.62
Navy Ship Berthing	2.7	2.4
Navy Small Craft Berthing	6.2	7.16
Total	1,510.80	1,496.35
Land Use		
Commercial Fishing	8.3	6.46
Marine Sales and Services	9.1	10.45
Sportfishing	4.3	4.11
Commercial Recreation	260.1	283.61
Airport Related Commercial	38	5.37 ¹
Aviation Related Industrial	152.9	11.47 ¹
Industrial Business Park	33.1	32.34
Marine Related Industrial	170	172.88
Marine Terminal	65.6	64.35
Open Space	19.2	30.64
Park/Plaza	118.9	128.09
Golf Course	97.8	100.14
Wetlands	192	101.33
Harbor Services Land	2.6	4.85
Streets	172.5	144.07 ¹
City Pump Station	0.4	0.75
Navy Fleet School	25.9	27.28
Total	1,370.70	1,128.19
Total Water and Land Use		
	2,881.50	2,624.54²

¹ Some areas included in the Certified PMP (e.g., the San Diego International Airport) and the corresponding designations were removed from the District's permitting jurisdiction and land use authority and are not proposed within the proposed PMPU area. Through the exercise of converting the Certified PMP to GIS, these removed areas were not included in the GIS conversion. Thus, certain land use designations may show a large decrease in acreage between the Certified PMP and the GIS Conversion (e.g., Airport Related Commercial, Aviation Related Industrial, Streets), and were not included at all in the GIS Conversion (e.g., International Airport).

² The change in total acreage between the Certified PMP and the GIS Conversion of the Certified PMP is due to mapping corrections, as well as the removal of certain areas (e.g., San Diego International Airport) from the District's permitting jurisdiction and land use authority. These removed areas were not included in the exercise of converting the Certified PMP to GIS, thus the total acres show an overall decrease.

2.2.3.1 Planning District 1: Shelter Island

The Shelter Island Planning District (PD1) is located on the southeastern side of the Point Loma Peninsula, at the entrance to the Bay, near upland communities, military installations, and the Cabrillo National Monument. The island segment of Shelter Island is a narrow strip of land, approximately 1 mile in length and less than 0.1 mile in width, that extends off the Point Loma peninsula via Shelter Island Drive. West Shelter Island wraps around the Shelter Island Yacht Basin, and includes a diverse mix of water-oriented development and activities, including marinas, yacht clubs, transient docking, resort hotels, restaurants, and boatyards. Recreational areas include Shelter Island Shoreline Park, the Yokohama Friendship Bell, Shelter Island Pier, Shelter Island Boat Launch, La Playa Trail, La Playa Piers, and Kellogg Beach. East Shelter Island wraps around America's Cup Harbor and includes coastal-dependent marine services and fishing industries that provide for long-term economic viability and growth in the region. The predominant uses in this area consist of commercial recreation, marine sales and services, commercial fishing, and sportfishing. Figure 2-2 depicts the existing conditions in PD1.



Source: Port of San Diego, 2020.



Figure 2-2
PD1 – Shelter Island Existing Conditions
Port Master Plan Update

2.2.3.2 Planning District 2: Harbor Island

The Harbor Island Planning District (PD2) is located east of the Point Loma Peninsula and PD1, north of the Coronado military installations, west of the Embarcadero, and directly south of the San Diego International Airport. With nearly 5 miles of waterfront, the Harbor Island Planning District offers views of the Bay from the shoreline parks, shoreline path and play areas, and restaurants located on the water's edge of the western and eastern tips of the island. The island segment of Harbor Island primarily includes hotels, restaurants, and marinas that are located on the basin side of Harbor Island. Additionally, a portion of east Harbor Island includes surface parking lots, former off-airport rental car facilities, and the San Diego Harbor Police facility. The U.S. Coast Guard Station San Diego is to the east of Harbor Island, and San Diego International Airport is to the north. West of Harbor Island lies the U.S. Naval Training Center, and the residential neighborhood of Point Loma.

Spanish Landing Park is a linear park located along the western basin of Harbor Island that lies adjacent to Harbor Drive. Existing amenities at Spanish Landing Park include pedestrian and bicycle paths, public art, a play structure, and a beach area. Additionally, PD2 includes the District Administration Building, former rental car services and off-airport parking, and surface parking lots associated with industrial maritime businesses along Pacific Highway. Figure 2-3 depicts the existing conditions in PD2.

2.2.3.3 Planning District 3: Embarcadero

The Embarcadero spans the length of the Bayfront within the downtown San Diego area, beginning at Laurel Street to the north (just south of San Diego International Airport) and ending roughly at Park Boulevard, which is south of the Convention Center and north of Tenth Avenue Marine Terminal (TAMT). Harbor Drive, which runs the length of PD3, provides vehicular access and on-street parking to development along the Embarcadero. The Embarcadero consists of three sub-districts in the existing PMP: North Embarcadero, Central Embarcadero, and South Embarcadero. The physical conditions within each of these sub-districts are described provided below. Figure 2-4 depicts the existing conditions in PD3.

North Embarcadero

The North Embarcadero runs north to south and spans the downtown Bayfront from Laurel Street to the north to just before North Harbor Drive to the south (where it turns east, just north of Ruocco Park and Seaport Village). North Embarcadero provides a diverse waterside experience including water-based transit vessel berthing and commercial fishing activities at the Grape Street Piers, recreational vessel berthing and anchorage locations, and cultural facilities in the form of the Maritime Museum and USS Midway Museum. Cruise ship operations are located within North Embarcadero with facilities on B Street Pier and Broadway Pier connecting visitors to Tidelands and downtown San Diego. A waterside promenade providing continuous waterside access extends the entire North Embarcadero with public art features and plaza areas for visitors. A mix of visitor-serving commercial and recreational activities including hotels and restaurants are also located within the North Embarcadero. The U.S. Navy's Commander, Naval Base San Diego, and Naval Supply Center also occupy large areas on the eastern side of North Harbor Drive, adjacent to the North Embarcadero. The San Diego County Administration Building, Little Italy, and the central business district of downtown San Diego are east of the North Embarcadero. Development adjacent to the planning district is typical of a downtown and includes a mix of high-density residential dwellings, high- and medium-rise office buildings, restaurants, and retail establishments.



Source: Port of San Diego, 2020.



Figure 2-3
PD2 – Harbor Island Existing Conditions
Port Master Plan Update



Source: Port of San Diego, 2020.



Figure 2-4
PD3 – Embarcadero Existing Conditions
Port Master Plan Update

Central Embarcadero

The Central Embarcadero is located south of the Maritime Museum and USS Midway Museum (within the Northern Embarcadero) and northwest of the San Diego Convention Center. The Central Embarcadero provides a mix of recreational, visitor-serving commercial, and commercial fishing uses. Waterfront open spaces, such as Tuna Harbor Park, Ruocco Park, and Embarcadero Marina Park North, provide recreational opportunities and views of the water. Tuna Harbor Basin, home to San Diego's well-established historic commercial fishing industry, allows visitors to see activities such as net mending and fish offloading firsthand, as well as visit the commercial fishermen's Dockside Market. This is also the location of the American Tunaboat Association. Old Police Headquarters, together with Seaport Village's small-scale commercial development located along the waterfront, provides visitors with a mix of restaurants and specialty retail. Downtown San Diego and the Gaslamp Quarter are east of the Central Embarcadero, which are dominated by dense urban development of mainly high- and medium-rise hotel, residential, and office buildings, along with restaurant and retail buildings.

South Embarcadero

The South Embarcadero is bounded to the north by Seaport Village and to the south by the TAMT. Development within the South Embarcadero area includes hotels, restaurants, the San Diego Convention Center, and public parks, including Embarcadero Marina Park South where a permanent performance venue is located. Marinas occupy the inlet created by the two L-shaped segments that form Embarcadero Marina Parks North and South. The South Embarcadero is adjacent to the Gaslamp Quarter of the City of San Diego, which includes high- and medium-rise residential buildings, medium-rise office buildings, Petco Park stadium, and numerous tourist-oriented facilities, such as hostels and hotels, restaurants, and boutique retail shops.

2.2.3.4 Planning District 4: Working Waterfront

The Working Waterfront Planning District (PD4) is located southeast of the San Diego Convention Center and is composed predominantly of marine-related industrial facilities, including a strategic regional, State, and Federal port located on the TAMT, ship building facilities, and ship repair yards, as well as a waterfront park. Planning District 4 contains a highly productive consolidation of marine terminal and maritime services and industrial land uses, facilitating maritime trade and providing large-scale coastal-dependent industrial activities with direct access to heavy rail service and deep-water berthing. The TAMT is located on a 96-acre parcel, which was formerly a landfill, and includes eight deep-water berths capable of accommodating four large ocean-going vessels. The TAMT is connected to the regional rail and roadway network, which provides critical connections and allows the transportation of cargo. Historically, the terminal has focused on the following cargo types: dry bulk, liquid bulk, refrigerated and nonrefrigerated containers, and multipurpose/break bulk. The area south of TAMT contains the BAE Systems San Diego Ship Repair Yard, the General Dynamics NAASCO shipbuilding and repair facility, a Chevron terminal, and other ship building facilities and ship repair yards, including marine-related engineering businesses. Nestled between the TAMT and the shipbuilding and ship repair facilities to the south, Cesar Chavez Park and the adjacent Cesar Chavez Pedestrian Pier provide valuable public access to the Bay and visitor-serving amenities. The community of Barrio Logan is located east/northeast of the Working Waterfront. Barrio Logan includes single- and multi-family residential dwellings, as well as commercial and industrial development. Figure 2-5 depicts the existing conditions in PD4.

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Source: Port of San Diego, 2020.



Figure 2-5
PD4 – Working Waterfront Existing Conditions
Port Master Plan Update

2.2.3.5 Planning District 7: South Bay

The South Bay Planning District (PD7) encompasses the water and land area at the southern end of the San Diego Bay. The area surrounding this planning district is composed of the Chula Vista Wildlife Reserve to the north, the San Diego Bay National Wildlife Refuge South San Diego Bay Unit managed by the United States Fish and Wildlife Service to the south, and State Highway 75 to the west. In addition, PD7 includes a marshy habitat conservation area and a narrow inlet that extends between the salt evaporation ponds. Figure 2-6 depicts the existing conditions in PD7.

2.2.3.6 Planning District 8: Imperial Beach Oceanfront

The Imperial Beach Oceanfront Planning District (PD8) is not located along the San Diego Bay; rather it lies on the Pacific Ocean side, west of the City of Imperial Beach. The planning district consists of a long, uninterrupted beach and the Imperial Beach Pier, an approximately 1,300-foot-long publicly accessible pier that includes a promenade and restaurant and provides public fishing opportunities. Adjacent to the beach is predominantly residential development, including single-family homes, condominium complexes, and multi-family apartment complexes that is within the jurisdiction of the City of Imperial Beach. Figure 2-7 depicts the existing conditions in PD8.

2.2.3.7 Planning District 9: Silver Strand

The Silver Strand Planning District (PD9) is located on the western side of San Diego Bay between the Bay and the Pacific Ocean, with Coronado located to the north and Imperial Beach to the south. Crown Cove is located in the northern portion of PD9, which is adjacent to the Crown Cove Aquatic Center, which offers recreational activities, such as paddling, sailing, kayaking, surfing, and safe boating education. The Crown Cove Anchorage (A7) also provides transient docking and mooring for boaters. Continuing south onto Coronado Bay Road, Crown Isle offers visitor-serving commercial amenities, including a hotel and restaurants, as well as a recreational boat berthing marina. Piers and docks extend into Crown Isle from private residences located off Tidelands, connecting directly to the residences with no ability to provide public access due to physical constraints. Further, Grand Caribe Isle and South Cays include the small land mass east of the Coronado Cays that is connected to the Silver Strand by Grande Caribe Causeway. Additional piers and docks with no associated public access extend into the planning district from off Tidelands private residences. The northern portion of Grand Caribe Isle includes commercial recreation, marinas, and boat storage. The southern portion includes Grand Caribe Shoreline Park, which was created as a native plant garden and natural habitat restoration area.

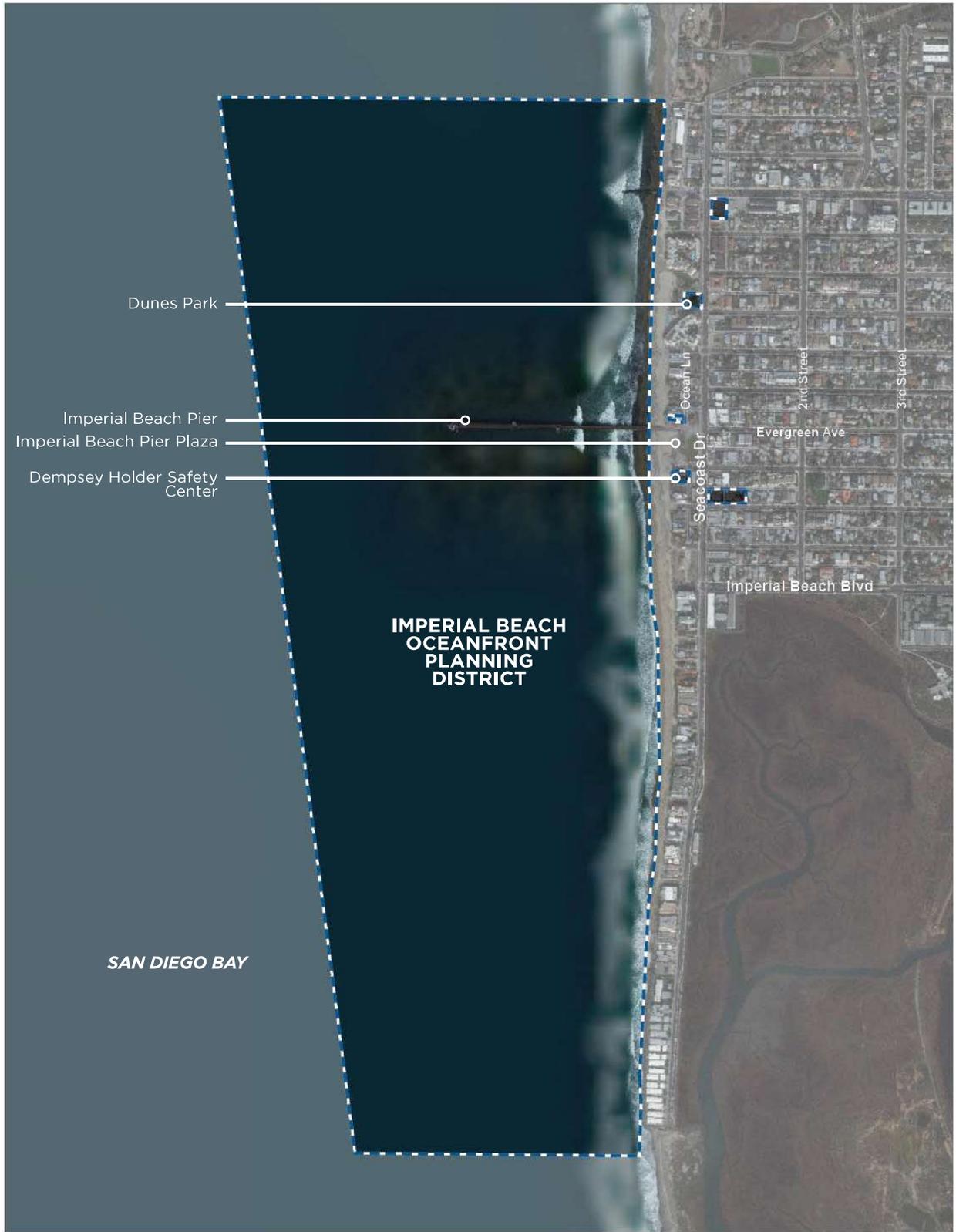
Figure 2-8 depicts the existing conditions in PD9.



Source: Port of San Diego, 2020.



Figure 2-6
PD7 – South Bay Existing Conditions
Port Master Plan Update



Source: Port of San Diego, 2020.



Figure 2-7
PD8 – Imperial Beach Oceanfront Existing Conditions
Port Master Plan Update



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Source: Port of San Diego, 2020.



Figure 2-8
PD9 – Silver Strand Existing Conditions
Port Master Plan Update

2.2.3.8 Planning District 10: Coronado Bayfront

The Coronado Bayfront Planning District (PD10) is located along the San Diego Bay on the southeastern side of the City of Coronado. Commercial development is concentrated toward the northern portion of PD10, including the Ferry Landing Marketplace, which offers a number of restaurants and small boutique or visitor-serving retail. Additionally, the Coronado Ferry Landing offers public water-based transit to and from downtown San Diego. Tidelands Park provides a variety of land-based recreational opportunities, including play fields, a public beach, and a skate park. Additionally, development along the southern portion of PD10 includes a marina, boat rental facilities, yacht clubs, hotels, and the Coronado Municipal Golf Course. North and west of the Coronado Bayfront, development includes the Naval Air Station North Island, single- and multi-family residences, and commercial centers. South of the Coronado Bayfront includes high-rise condominiums, a community center and public parks, and the U.S. Naval Amphibious Base. Figure 2-9 depicts the existing conditions in PD10.

2.3 Cumulative Setting

2.3.1 Cumulative Methodology

According to Section 15130(b) of the State CEQA Guidelines, a cumulative impact analysis may be conducted using one of two methods: the List Method, which includes “a list of past, present, and probable future projects producing related or cumulative impacts,” or the Plan Method, which uses “a summary of projections contained in an adopted local, regional, or statewide plan or related planning document,” or in a prior environmental document for such a plan which has been adopted or certified, that described or evaluated regional or area wide conditions contributing to the cumulative impact. Because the proposed project involves a comprehensive update to the current PMP and would guide growth within the District to the 2050 planning horizon, the cumulative analysis for most issue areas addressed in the PEIR utilizes the Plan Method (unless otherwise specified), supplemented by plans or programs recently adopted or currently in the planning phase. Due to the regional draw of uses along the Bay, which typically attracts local and visiting regional populations, utilization of the Plan Method is appropriate, as the regional growth projections can be correlated to a potential increase in future visitors to the Port upon buildout of the PMPU.

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Source: Port of San Diego, 2020.



Figure 2-9
PD10 – Coronado Bayfront Existing Conditions
Port Master Plan Update

2.3.2 Application of the Plan Method

In the San Diego region, the San Diego Association of Governments (SANDAG) serves as the regional planning agency responsible for forecasting the region’s population growth. These growth projections serve as the foundation for regional planning documents, such as water supply management plans and general plans, and provide the basis for determining housing, infrastructure, and transportation needs across the San Diego region. On October 25, 2019, the Series 14: 2050 Regional Growth Forecast was accepted by the SANDAG Board of Directors for planning purposes (SANDAG 2019). The Series 14 Regional Growth Forecast represents a combination of economic and demographic projections, the land use plans and policies that existed when it was developed, as well as any anticipated land use plan changes that could occur in the region through the year 2050. (Note that at the time of this analysis, SANDAG still recommends use of the Series 13 for transportation modeling, including assessing regional vehicle miles traveled [VMT].)

According to the Series 14 forecast, SANDAG projects that, between 2016 and 2050, the region’s population will grow by approximately 700,000 people (SANDAG 2019). The growth in population will drive job growth and housing demand within the region, adding nearly 408,000 jobs and more than 420,000 housing units by 2050. Over half of the growth in new housing is anticipated to occur in the City of San Diego (SANDAG 2019). However, some resource chapters may rely upon resource-specific projections, such as those contained in Urban Water Management Plans. Resource-specific information from other cumulative documents is provided in the individual resource chapters, and weblinks to these documents are provided in Chapter 8, *References*.

Since the Series 14 Regional Growth Forecast was adopted in 2019, additional regionally significant plans and programs have been adopted or are currently in the planning phase and, therefore, were not explicitly included in the data used to prepare the Series 14 growth forecast. Table 2-2 lists these additional plans and programs.

Table 2-2. Additional Cumulative Plans and Programs

#	Plan/Program	Agency	Description	Status
1	Chula Vista Bayfront Master Plan (CVBMP) ¹	San Diego Unified Port District	The CVBMP was prepared to guide the redevelopment of underutilized and vacant areas with a mix of land uses, as well as infrastructure throughout the Chula Vista Bayfront Planning District. The Board of Port Commissioners certified the Final EIR and approved the CVBMP in May 2010, and authorized the issuance of a Coastal Development Permit (CDP) in June 2019.	Approved in May 2010
2	Midway-Pacific Highway Community Plan Update	City of San Diego	The project involved a comprehensive update to the Midway-Pacific Highway Community Corridor Plan to guide development through 2035. The update included changes to public and private land uses; local streets and the transit network; provision of parks and public facilities; urban design guidelines; and recommendations to preserve and	Approved in September 2018

#	Plan/Program	Agency	Description	Status
			enhance historic and cultural resources within the community.	
3	Old Town San Diego Community Plan Update	City of San Diego	The project involved a comprehensive update to the 1987 Old Town San Diego Community Plan to guide development through 2035. The update included changes to public and private land uses; local streets and the transit network; provision of public facilities; architectural and urban design guidelines; and recommendations to preserve and enhance natural open space and historic and cultural resources within the community.	Approved in October 2018
4	Mission Valley Community Plan Update	City of San Diego	The project involves a comprehensive update to the 1985 Mission Valley Community Plan. The update provides a vision for the community and identifies how the City and development community will implement that vision, through implementing actions, design guidelines, and policies for development.	Approved in September 2019
5	2019 General Plan/Local Coastal Program Land Use Plan Update	City of Imperial Beach	The 2019 update of the General Plan/Local Coastal Plan focuses on policy changes that have occurred since the General Plan was adopted in 1994. Issues being addressed in the update include climate change and resiliency, environmental justice, sustainability, housing, community health, economic prosperity, multi-modal mobility, and sea level rise. The update included changes to the General Plan/Local Coastal Program elements to address these issues.	Plan in preparation
6	National City Bayfront Projects and Plan Amendments	San Diego Unified Port District	The proposed project includes landside (58 acres) and waterside (17 acres) development components, as well as an amendment to the District's PMP and the City's General Plan, Local Coastal Program, Harbor District Specific Area Plan, and Land Use Code to change the allowable land and water uses on the approximately 75-acre project site. Primary development components include a recreational vehicle (RV) park; modular cabins; dry boat storage; an expanded marina; hotels; restaurants; retail; a rail connector and storage track; closure and/or narrowing of roads; and Segment 5 of the Bayshore Bikeway.	EIR in preparation

#	Plan/Program	Agency	Description	Status
7	Wetland Mitigation Bank at Pond 20	San Diego Unified Port District	The project involves the establishment of a mitigation bank on an 76-acre site located at Pond 20. and would incorporate three adjacent parcels (A, B, and C) into the PMP and designate them as Commercial Recreation. Although no commercial recreation-related development is proposed at this time, the EIR identified a reasonably foreseeable scenario to include up to 105,000 square feet of commercial space up to two stories tall.	EIR certified in April 2021
8	San Diego International Airport, Airport Development Plan	San Diego County Regional Airport Authority	The Airport Development Plan (ADP) is a master planning effort to identify the facilities needed to meet the region's air travel demand through 2035. The primary project of the ADP is the replacement of the aging Terminal 1 with up to 30 gates and associated facilities. Other proposed components include a new on-airport entry roadway, dual level roadways and curb front, expanded close-in parking, and airfield improvements.	EIR certified on January 9, 2020, with National Environmental Policy Act (NEPA) Environmental Assessment in public review until August 2, 2021
9	Naval Air Station North Island Airport Land Use Compatibility Plan	San Diego County Regional Airport Authority	The Naval Air Station North Island (NASNI) Airport Land Use Compatibility Plan (ALUCP) is being prepared by the San Diego County Regional Airport Authority to serve as the primary tool for reviewing proposed development in the NASNI environs for compatibility with military aviation operations. The ALUCP is also intended to assist local agencies in preparing or amending land use plans and regulations and in the review of proposed development within their jurisdiction.	ALUCP and Final EIR approved and certified, respectively, on October 1, 2020
10	2021 Regional Plan	San Diego Association of Governments	The project involves an update to the current Regional Plan, which is required to be updated every 4 years pursuant to State and Federal law. When adopted, the 2021 Regional Plan will include a new Regional Transportation Plan, Regional Comprehensive Plan, and Sustainable Communities Strategy for the San Diego region.	Proposed
11	The Seaport San Diego Project	San Diego Unified Port District	Based on the proposal accepted by the Board on November 6, 2016 (2016-0607) and the Exclusive Negotiating Agreement adopted by the Board, on May 16, 2017 (2017-0155), and signed on October 2, 2017 (Doc# 67343) at the	Proposed

#	Plan/Program	Agency	Description	Status
			<p>time of this writing, this proposal comprises the following potential development intensity (all square footages, hotel rooms, retail square feet, restaurant square feet, parking spaces, and project components are approximate and could change in the future):</p> <p>(1) 390,000 square feet of retail space;</p> <p>(2) 480-foot-tall observation tower, including 10,000 square feet of restaurant and a 10,000-square-foot observation tower;</p> <p>(3) 19,130 square feet of office space;</p> <p>(4) a 500-room hotel at 405,805 square feet;</p> <p>(5) a 170-room (350 beds) micro-hotel with affordable pricing, at 117,450 square feet;</p> <p>(6) a 225-room (475 beds) hostel at 122,381 square feet;</p> <p>(7) a 20,000-square-foot event center;</p> <p>(8) 65,150 square feet of marine education space;</p> <p>(9) a 178,490-square-foot aquarium;</p> <p>(10) 164 marina slips, both for commercial fishing and recreational use;</p> <p>(11) 30 acres of public space, 21 acres of which are park space; and</p> <p>(12) 2,410 new parking spaces.</p>	
12	Tenth Avenue Marine Terminal (TAMT)	San Diego Unified Port District	<p>The TAMT Redevelopment Plan includes a variety of infrastructure investments to be undertaken over the long-term in order to increase the terminal's capabilities and capacity. These include up to five gantry cranes, additional and consolidated dry bulk storage capacity, enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, additional open storage space, on-dock intermodal rail facilities, a centralized gate facility, and the Demolition and Initial Rail Component, which would demolish two underutilized transit sheds in order to accommodate rail upgrades and other improvements. The TAMT EIR analyzed cargo growth to 4,675,567 metric tons (MT) per year.</p>	Approved
13	B Street Cruise Ship Terminal Interior Improvements	San Diego Unified Port District	<p>The interior improvements to the B Street Cruise Terminal (Terminal) will improve customer service, accessibility, and safety in the Terminal. The project</p>	Approved

#	Plan/Program	Agency	Description	Status
	by Port of San Diego at B Street Pier		<p>comprises the following, with a 1-year construction period beginning in 2023, and lasting approximately one year:</p> <ul style="list-style-type: none"> (1) new exterior cladding and cut-in one new exterior door opening; (2) easterly end, 3,181-square-foot North Berth Embark Bag Scan; (3) easterly center, 12,643-square-foot Embark Entry and Queuing for Security; (4) 1,190-square-foot corridor – enclosed area includes interior doors, partitions, and fire alarm and fire sprinkler upgrades for passage to North and South Berth check-ins; (5) 8,300-square-foot demolition of existing Exhibit Hall; (6) 20,919-square-foot Check-In for North Berth and Check-In for South Berth; (7) 20,379-square-foot seating and waiting for North Berth and seating and waiting for South Berth 	

¹ Although included in this table, the CVBMP was approved in May 2010, and therefore was included in the Series 14 Regional Growth Forecast adopted by SANDAG in October 2019.

3.1 Introduction

Pursuant to Chapter 8, Article 3 (commencing with Section 30710) of the California Coastal Act (CCA), the San Diego Unified Port District (District) is undertaking an extensive update of its existing Port Master Plan (PMP).¹ In accordance with CCA, Public Resources Code, Section 30711, the proposed Port Master Plan Update (proposed PMPU) provides the official goals and planning policies, and identifies permissible water and land uses, for development and conservation of the District lands, tidelands, and submerged lands (collectively, Tidelands or District Tidelands) that comprise the PMPU planning area (PMPU area). The PMPU area encompasses the majority of the District's jurisdiction (with the exceptions explained below), including acquired upland parcels, which amounts to approximately 1,009 acres of land² and 1,454.2 acres of submerged lands in and around San Diego Bay (Bay) and along the Imperial Beach oceanfront. In addition, as required by Section 30711 of the CCA, the proposed PMPU identifies a list of proposed appealable projects, as defined in Section 30715 of the CCA.³ Appealable projects are analyzed in this Draft Program Environmental Impact Report (PEIR) at a programmatic level using the square footages and development projections identified for these improvements in the proposed PMPU. Any future appealable projects would be subject to project-level environmental review once specific developments are proposed.

The proposed PMPU will implement the District's approximately 30-year planning vision through a series of goals, objectives, and policies that set the foundation and direction for planned improvements and development standards as established within the following six elements:

- Water and Land Use Element
- Mobility Element
- Ecology Element

¹ Per Section 30716 of the CCA, because the District already has a certified PMP, the proposed PMPU is considered an amendment to the existing PMP. The update to the PMP excludes two planning districts, PD5: National City Bayfront and PD6: Chula Vista Bayfront, and the Pond 20 portion of PD7: South Bay. Further, effective January 1, 2020, pursuant to Senate Bill (SD) 507, certain water parcels had previously been assigned designations in the Certified PMP for informational purposes but were not a part of the District's coastal permitting authority. Pursuant to SB 507, those parcels have since been granted to the District by the California State Lands Commission (CSLC), as part of the granted approximately 8,300 acres (subject to a survey) of additional submerged lands within San Diego Bay. Thus for consistency, these parcels that had previously been assigned designations in the Certified PMP and have been granted to the District are to be incorporated into the proposed PMPU area and within the District's coastal permitting authority (see Figure 3-13). The remaining SB 507 waters are not incorporated within the PMPU.

² This excludes approximately 670 acres of land that is currently leased to the San Diego International Airport.

³ As established in CCA Sections 30711(a)(4), a port master plan shall include proposed projects listed as appealable in Section 30715. Appealable projects include the storage, transmission, and processing of liquefied natural gas and crude oil; wastewater treatment facilities; roads or highways not principally intended for internal circulation within port boundaries; office and residential buildings not principally devoted to the administration of activities within the port; hotels, motels, and shopping facilities not principally devoted to the sale of commercial goods utilized for water-oriented purposes; commercial fishing facilities; and recreational small craft marina related facilities; oil refineries; and petrochemical production plants. (See CCA, Section 30715.)

- Safety and Resiliency Element
- Environmental Justice Element
- Economics Element

Chapter 4 of the PMPU also proposes baywide⁴ development standards, which establish requirements for the physical development of property. As stated in the PMPU, they provide standards for design that enlivens and enriches Tidelands experience for visitors, businesses, and workers, and will be used to implement new development in a manner that is consistent with the surrounding pattern and character.

In addition, the District's jurisdiction is divided into 10 planning districts (PDs) that group Tideland properties into identifiable and functional units. Planning district boundaries conform closely to the boundaries of established municipal jurisdictions following logically grouped geographic areas and provide the detailed planned improvements, development standards, special allowances, and water and land use maps. The 10 proposed planning districts are as follows:

- PD1 – Shelter Island
- PD2 – Harbor Island
- PD3 – Embarcadero
- PD4 – Working Waterfront
- PD5 – National City Bayfront (excluded from the PMPU)
- PD6 – Chula Vista Bayfront (excluded from the PMPU)
- PD7 – South Bay (Pond 20 is excluded from the PMPU)
- PD8 – Imperial Beach Oceanfront
- PD9 – Silver Strand
- PD10 – Coronado Bayfront

National City Bayfront (PD5), Chula Vista Bayfront (PD6), and the Pond 20 portion of South Bay (PD7), are not part of the proposed PMPU because no changes to those planning districts, or portions thereof, are proposed by the PMPU. The National City Bayfront is currently being planned under the National City Bayfront Projects & Port Master Plan Amendment program, which extends into the City of National City jurisdiction and is anticipated to be completed prior to the approval of the proposed PMPU and certification of the PMPU PEIR. The Chula Vista Bayfront has a recently approved land use plan for the entire planning district that is currently under implementation, and no changes are proposed to that land use plan. Finally, the District-owned property in the southern portion of Pond 20 was evaluated under the Wetland Mitigation Bank at Pond 20 Project EIR and Port Master Plan Amendment for the creation of a wetland mitigation bank and to incorporate the property into the current PMP, which was certified by the District's Board of Port Commissioners (Board) on April 13, 2021. The proposed PMPU amendments would not affect the water or land use designations and the anticipated buildout of these districts. As such, PD5, PD6, and the Pond 20 portion of PD7 are not a part of the proposed PMPU. and are not analyzed in this Draft PEIR; however, these programs or projects are considered as cumulative projects in the analysis of cumulative impacts in this Draft PEIR (see Table 2-2 in Chapter 2, *Environmental Setting*).

⁴ Anytime the term "baywide" is used in this EIR, it applies to the PMPU area.

3.2 Project Background and Purpose

At a special meeting held on February 4, 2013, the District’s Board proposed goals to implement an overall vision for the future development and uses of District Tidelands. The Board consensus was that comprehensive changes to the existing PMP would be required to achieve a coherent overall vision for the District. The Board’s decision kicked-off the first large-scale update of the PMP in the District’s history and initiated a multi-faceted planning effort referred to as *integrated planning*, which involved extensive public outreach and stakeholder engagement to form the basis for preparation of the proposed PMPU.⁵ The integrated planning process proposed a set of long-range planning principles that form a framework for future planning on Tidelands and consisted of two primary components: the *Vision Statement and Guiding Principles* and the *Integrated Planning Framework Report*, as detailed below.

- **Vision Statement and Guiding Principles.** The initial step was to define the proposed vision and guiding principles for the proposed PMPU by conducting a high-level assessment of District-wide assets and engaging in extensive public input. At the Board meeting on August 12, 2014, the Board accepted the Vision Statement and Guiding Principles. This document represented a culmination of a public engagement process and an effort to achieve a balance of all baywide interests.
- **Framework Report.** The visioning process was further refined by consideration of a core set of comprehensive ideas with broad scope or content that could be applied to the entire Bay, and which would be incorporated into the proposed goals, objectives, and policies of the proposed PMPU as well as through the planned improvements. The comprehensive ideas developed in the Framework Report revolve around the following concepts:
 - The Green Necklace⁶
 - The Baywide Water Plan
 - An Accessible Bayfront
 - The Comprehensive Park Plan
 - Natural Resources
 - Safety and Resilience
 - Economic Development

At the November 17, 2015, meeting, the Board accepted the Framework Report. This report provides guidance and informs the preparation of the proposed PMPU by describing several comprehensive ideas that are based upon core principles that cover a broad range of issues. The report is intended to provide the basic foundation for establishing the proposed goals, objectives, and policies of the PMPU.

⁵ The public outreach and engagement process thus far has included over 380 meetings with key stakeholders, partner agencies, and Board meetings over the 8-year planning process.

⁶ The idea of the Green Necklace is to provide a connected, continuous public greenway surrounding the Bay. While it may change character as it passes through each of the three major parts of the Bay (the North Bay, Working Waterfront, and the South Bay), the “architecture” of the Green Necklace is proposed to be a cohesive element, adding to the sense of the Bay as the major entity defining the whole region.

Together, the Vision Statement and Guiding Principles and the Framework Report (collectively referred to as the *Integrated Planning Vision*) provided a bridge between the visioning conducted for integrated planning and the drafting of the proposed PMPU. Preliminary planning concepts developed during these efforts resulted in the creation of cross-connecting themes that have been integrated into the proposed goals, objectives, and policies of the draft PMPU and include the following:

- Healthy Bay and Healthy Communities, which includes natural resource protection, environmental justice, climate change resiliency, and pollution reduction.
- Improved Mobility and Coastal Access, which includes mobility strategies with a strong focus on multimodal systems and land use integration; methods for planning, funding, and building regional infrastructure needs in partnership with other public agencies to ensure efficient development and operation of District lands; and optimization of coastal access to the Bay.
- Regional Economic Engine, which includes consideration of public-private partnerships, regional public-public agency initiatives, capital improvements, and innovative funding mechanisms.

Copies of the *Integrated Planning Vision* are available in the Office of the District Clerk as Clerk Document No. 63989.

3.3 Project Objectives

CEQA Guidelines Section 15124(b) requires an EIR to contain a statement of objectives that address the underlying purpose of the project, which may also show a project's benefits. The District has identified the following objectives for the proposed PMPU:

1. Create an integrated vision for the District that governs the use, design, and improvement of public trust lands in accordance with Section 30711 of the California Coastal Act (CCA), the Public Trust Doctrine, and the San Diego Unified Port District Act (Port Act).
2. Within the PMPU area, create standards for new development, which serve to: 1) enhance and blend development with the surrounding character; 2) provide a balanced and diverse range of complementary uses; and 3) provide enough activation year-round and during the day-time for visitors to minimize the seasonally-related downtimes of uses on Tidelands.
3. Streamline the project review and entitlement process for implementation of the Port Master Plan.
4. Allow for an intensity and diversity of development that provides on-going and sustainable revenues to the District to ensure the longevity of the District's operations and its ability to fulfill its legislative responsibilities; balance the future needs of the maritime industry, tourism, water and land recreation; and reinvestment in critical infrastructure and maintenance of waterfront amenities and facilities as required by the Port Act and Public Trust Doctrine.
5. Provide an interconnected mobility network that encourages a range of travel modes, including the expansion of water- and land-based transit opportunities to support the movement of people, goods, and military operations.

6. Enliven the public realm by providing and maintaining recreation open space opportunities, through the creation and maintenance of: 1) public accessways; 2) physical and visual access to the water; and 3) an interconnected open space network.
7. Provide opportunities for creating a vibrant waterfront destination with a range of attractions for visitors, while protecting and restoring the environment through the proactive management of sensitive biological resources and ensuring coastal access around San Diego Bay.

These project objectives support several benefits of the PMPU, which are discussed under Section 3.4, *Project Benefits*.

3.4 Project Benefits

The proposed PMPU will provide substantial benefits to the District and the region. The benefits comprise enhancing environmental protection of San Diego Bay and the Tidelands, creating opportunities for more public access to San Diego Bay, and increasing the District's economic contribution to the San Diego region. Some examples of the PMPU's benefits are listed below (note that these do not represent an all-encompassing list).

1. **Honoring the Water:** The proposed PMPU provides for the continued use of the Bay in step with the requirements of the CCA and the Port Act. It also furthers the goals of preserving and protecting the Bay and its shoreline, while promoting the water as a focal point to the mission and purpose of the District. To illustrate these points, the PMPU's Water Use Designations Table identifies water-dependent uses and lists a myriad of water-dependent Allowable Use Types permissible within these water use designations. Examples of water use designations include Anchorages, Commercial Fishing Berthing, Industrial Deep-Water Berthing, and Recreational Berthing. The proposed PMPU contains numerous goals, and associated objectives and policies, in both the Mobility and Ecology Elements that provide for both: (1) maintaining and improving access to the Bay, for use by the public; and (2) protecting the Bay and the Pacific Ocean (PD8). Examples of these goals include the following:
 - a. Water and Land Use Element Goal 1 - Balance the District's responsibilities under the Port Act with Coastal Act responsibilities and priorities.
 - b. Mobility Element Goal 1 - An integrated and diverse network that facilitates the movement of people and goods.
 - c. Ecology Element Goal 1 - Tidelands that support vibrant and healthy ecosystems.
 - d. Ecology Element Goal 2 - Clean, healthy waters and landside areas.
 - e. Ecology Element Goal 4 - Collaborative stewardship for the ecological health of San Diego Bay.
2. **Promoting Clean Air, Healthy Communities, and Environmental Justice:** The PMPU includes an Environmental Justice Element that focuses on providing equitable opportunities for people from disadvantaged communities to access Tidelands and enjoy a healthy environment. The goals, objectives, and policies in the proposed Environmental Justice Element support enhanced mobility linkages to Tidelands, improved air and water quality within disadvantaged communities, and increased opportunities for people from disadvantaged communities to participate in the District's planning processes. The PMPU also advances goals and objectives to

reduce air pollution from District operations in other elements. In addition to the Environmental Justice Element, the Ecology Element, and the Safety and Resilience Element provide for improving air quality and providing coastal access Examples include the following:

- a. Environmental Justice Element Goal 1 – Ensure Tidelands are accessible.
 - b. Environmental Justice Element Goal 3 – Healthy, thriving communities in and around Tidelands.
 - c. Ecology Element Goal 3 – Clean air for a healthy environment and healthy communities.
 - d. Safety and Resilience Element Goal 3 – Climate and coastal resilient Tidelands.
3. **Ensure Job Creation, Prudent Economic Policies, and Financial Sustainability:** The District is one of the region’s largest economic generators. The PMPU represents this by including goals, objectives, and associated policies that foster job creation, prudent economic policies, and financial sustainability to create a balance among the public good, economic growth, and the protection of natural resources. The District does not collect any taxes. Accordingly, the PMPU includes goals and objectives that provide for future investment that considers economic feasibility and long-term financial sustainability, not only for the District, but also for the State and the broader San Diego region. Examples of Economic Element Goals that illustrate this include:
- a. Goal 1 – A Financially Secure and Sustainable District.
 - b. Goal 2 – A Thriving Business Base and Regional Economy.
 - c. Goal 3 - A Growing and Diverse Economic Portfolio of Coastal-Dependent Industries and Businesses.
4. **Streamline the Approval Process:** A major benefit to the District by the proposed PMPU is its goal to streamline the approval process for development projects. The PMPU adds certainty throughout the development review and approval process. The PMPU, by including individual planning district development standards for scenic vistas, landscaping, walkway, promenades, and street design clearly defines what can be achieved without a future site-specific project requiring a Port Master Plan Amendment to the certified PMPU. Additionally, Chapter 4 of the PMPU shows the Baywide Development Standards for: (1) recreational uses, (2) building design and stepback requirements, (3) viewshed preservation, (4) landscaping design, and (5) mobility hubs. Chapter 6 of the PMPU includes PMPU Implementation and Development Conformance that describes the various aspects of future PMPU implementation, as well as the requirements for determining conformance with the PMPU. Chapter 6 is necessary to guide future development on Tidelands and to successfully carry out the broad vision and goals presented in the PMPU. Chapters provide the requirements for development with the District and specify how these requirements are to be applied.

A detailed description of the proposed PMPU is provided in Section 3.5 below. It includes the proposed water and land uses for each planning district, proposed planned improvements and development standards entailed for each planning district, and a summary of each of the six proposed elements.

3.5 Proposed PMPU Description

The proposed PMPU would serve as the primary tool for implementing the *Integrated Planning Vision* described under Section 3.2, *Project Background and Purpose*, and would represent an extensive update of the existing PMP. Under the proposed PMPU, new proposed baywide goals, objectives, policies, and standards would be implemented through proposed elements; and designated water and land uses have been modified to respond to the evolving water and land use demands of each planning district. The proposed goals, objectives, and policies are described within each of the six elements and are specific to the theme of each element. The proposed development standards and planned improvements would generally be implemented through compliance with the individual planning district sections. Information relevant to the analyses in this Draft PEIR, including policies, planned improvements, or development standards, from the elements and the planning districts are described in more detail in the following sections.⁷ A full copy of the PMPU is available for review in Appendix J.

While the proposed PMPU plans for a certain amount of development to occur on Tidelands in the future (i.e. planned improvements), approval of the PMPU does not automatically approve, or result in, any specific development project being implemented. However, to analyze a “worst-case” scenario, this Draft PEIR assumes all such planned development would occur over the approximately 30-year planning horizon of the proposed PMPU, with full buildout assumed to occur by 2050.⁸ Planned improvements for each planning district are identified in Section 3.5.3, *Proposed Planning Districts*, and are summarized in Table 3-4.

3.5.1 Proposed Elements and Policies

As noted above, the proposed PMPU contains six elements that apply across District Tidelands: Water and Land Use, Mobility, Ecology, Safety and Resiliency, Environmental Justice, and Economics. A general overview of each of these elements is provided below. Proposed goals, objectives, and policies for each element are provided in the PMPU (Appendix J).

3.5.1.1 Water and Land Use Element

The purpose of the Water and Land Use Element is to identify future water and land use designations and guide development on Tidelands. Specifically, this element establishes a balanced range of allowable uses in each designation that are intended to support the District’s role as a steward of Tidelands. The proposed Water and Land Use Element has been developed in conformance with the Coastal Act, the Public Trust Doctrine, and the Port Act and was created to meet the District’s goal of protecting priority uses, which have been established in part based on their functional dependency to the water.⁹ The proposed Element’s goals, objectives, and policies support:

⁷ Terms used to reference various components within the overall PMPU boundaries are provided in Section 2.3.3 and in the Glossary included as Appendix X.

⁸ Please note that the term “worst-case” refers to analyzing a scenario that could occur if all planned improvements are implemented during the life of the PMPU. While this is a reasonable approach for CEQA purposes, it is likely that not all planned improvements would be developed due to numerous potential factors.

⁹ The CCA prioritizes coastal-dependent and coastal-related uses, and the proposed PMPU mirrors this approach. (See e.g., CCA Sections 3001.5, 30233 and 30255.)

- Honoring the unique relationship between the diverse character of Tidelands and the water.
- Balancing the requirements of the Port Act and Coastal Act.
- Improving the public's access to, and experience on, Tidelands.

In addition, the proposed goals, objectives, and policies contained in this element provide a framework for the District to:

- Provide a diversity of trust-consistent water and land uses.
- Enhance coastal access throughout Tidelands.
- Retain and expand priority coastal uses.
- Provide coastal and landside improvements.
- Encourage coordination with agency stakeholders.

Water and Land Use Designations

The proposed PMPU establishes 19 water and land use designations to ensure that a wide variety of uses are located throughout Tidelands and that an appropriate amount of space is provided for each use. The PMPU also ensures that each use is appropriately sited based on character and compatibility with adjacent uses. Each water and land use designation includes allowable use types (both primary and secondary) that are permitted within each designation, which are defined in Table 3.1.5 of the proposed PMPU and the designations under which these allowable use types are permitted as either a primary or secondary use are identified in Table 3.1.2 and Table 3.1.3 of the proposed PMPU (Appendix J).

The designations proposed in the PMPU consolidated the 35 water and land use designations from the certified Port Master Plan into 19 broader designations to more appropriately capture associated use types, while allowing for greater efficiency when implementing the plan. Some use designations, such as Commercial Fishing (both water and land), Marine Sales and Services, and Sportfishing, are considered high-priority, water-dependent uses under the CCA and maintained more individualized designations in recognition of their CCA status. Most designations were consolidated into broader designations, except Marine Terminal, which was divided into two separate designations in the proposed PMPU: Marine Terminal and Visitor-Serving Marine Terminal. In addition, several designations were not carried forward because they could be consolidated into more than one of the broader proposed designations (e.g., Specialized Berthing) or the areas with those designations were not included in the proposed PMPU (e.g., Navy Fleet School, International Airport). Table 3-1 summarizes how the certified Port Master Plan water and land use designations, respectively, were consolidated into the proposed PMPU designations.

Table 3-1. Water and Land Use Designation Consolidation

Certified PMP Designations	Proposed PMPU Designations
Water Use Designation	
Commercial Fishing Berthing	Commercial Fishing Berthing
Sportfishing Berthing	Sportfishing Berthing
Recreational Boat Berthing	Recreational Berthing
Marine Services Berthing	Marine Services Berthing
Terminal Berthing	Industrial and Deep-Water Berthing

Certified PMP Designations	Proposed PMPU Designations
Specialized Berthing	
Open Bay/Water Open Ocean	Open Bay/Water
Estuary Wetlands ¹	Conservation/Intertidal
Boat Anchorage Ship Anchorage	Anchorage
Boat Navigation Corridor Ship Navigation Corridor	Navigation Corridor
Navy Ship Berthing Harbor Services Water Navy Small Craft Berthing	<i>Designations not carried forward in the PMPU and redistributed to other designations depending on the planning district</i>
Land Use Designation	
Commercial Fishing	Commercial Fishing
Marine Sales and Services	Marine Sales and Services
Sportfishing	Sportfishing
Commercial Recreation	Commercial Recreation
Industrial Business Park Marine Related Industrial	Maritime Services and Industrial
Marine Terminal	Marine Terminal Visitor-Serving Marine Terminal
Open Space Park/Plaza Golf Course	Recreation Open Space
Wetlands ¹ Habitat Replacement	Conservation Open Space
Harbor Services Land Streets	Institutional/Roadway
Aviation Related Commercial Aviation Related Industrial City Pump Station International Airport Navy Fleet School	<i>Designations not carried forward in the PMPU and redistributed to other designations depending on the planning district</i>

¹ Areas designated as Wetlands in the certified PMP were consolidated to either a proposed water use designation (Conservation/Intertidal) or land use designation (Conservation Open Space) depending on the location of the designated area.

Figure 3-1 provides a map of the water and land uses, and Table 3-2 describes each of the proposed water and land use designations in detail with acreages.

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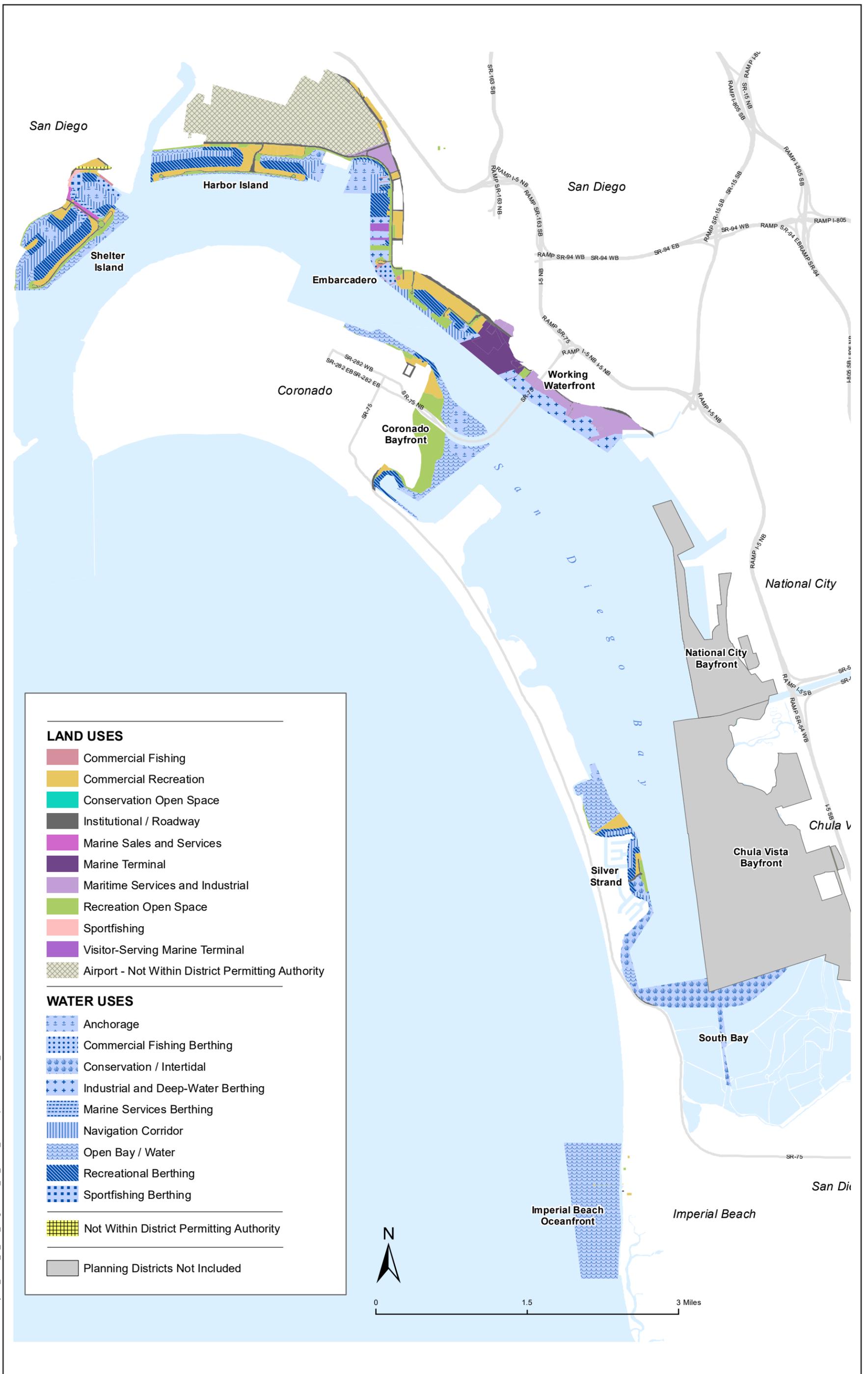


Figure 3-1
Baywide Water and Land Use Map
Port Master Plan Update



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Table 3-2. Proposed PMPU Water and Land Use Designation Descriptions¹

Use Designation	Description
Water Use	
Anchorage	Water areas primarily used to moor small and large private recreational and commercial watercraft. This designation includes the management and regulation of short- to long-term anchorages subject to permit requirements. Anchorage areas include access areas, surrounding navigable waters, and areas appropriate for the natural movement of moored vessels.
Commercial Fishing Berthing	Water areas primarily used for commercial fishing berthing. This designation allows collocation with other supporting primary and secondary water uses or facilities and usually is located adjacent to shoreside facilities designated for the promotion and protection of commercial fishing – a priority use in the CCA. This designation is supportive of the Commercial Fishing land use designation.
Conservation/ Intertidal	Water areas primarily reserved for the management of habitat, wildlife conservation, and environmental protection. This designation allows scientific research, education and other uses that support environmental protection, creation and restoration. This designation is complementary to land use designations of Conservation Open Space, Open Bay/Water, and Recreational Open Space, which may involve public access points or piers where appropriate.
Industrial and Deep-Water Berthing	Water areas primarily dedicated to ship berthing directly adjacent to berths. This designation supports the Marine Terminal, Visitor-Serving Marine Terminal, and Maritime Services and Industrial land use designations, with functional dependencies on direct access to, or association with, deep-water berthing and allows other supporting primary and secondary water uses or facilities.
Marine Services Berthing	Water areas primarily reserved for boat sales, vessel building and repair facilities, and marine services berthing. This designation allows other supporting primary and secondary water uses or facilities.
Navigation Corridor	Water areas primarily devoted to the maneuvering of vessels.
Open Bay/ Water	Water areas adjoining shoreline recreation areas, boat and nonmotorized launch facilities, transient docking, water-based transfer points, public access points, public fishing piers, public vista areas, and other public recreational facilities. Multiple uses of Open Bay/Water areas for recreation and for natural habitat purposes are possible under this designation.
Recreational Berthing	Water areas primarily associated with the mooring, docking, and operations of recreational vessels. This designation allows numerous, other primary water uses or facilities.
Sportfishing Berthing	Water areas primarily serving sportfishing vessels and associated waterside facilities. This designation allows collocation with other supporting primary and secondary water uses or facilities and usually is located adjacent to shoreside facilities designated to support sportfishing.
Land Use	
Commercial Fishing	Commercial fishing water and land use areas are designated for the promotion and protection of these priority CCA uses. Facilities and operations, including 24-hour, 365-day truck access and parking, related and complementary to commercial fishing. This designation allows collocation with other supporting primary and secondary land uses or shoreside facilities designated for the promotion and protection of commercial fishing. Cannery facilities and operations are prohibited in this use type.

Use Designation	Description
Commercial Recreation	Land areas primarily for visitor-serving facilities and accommodations providing shoreside public access to coastal areas. This designation supports the Recreational Berthing and Open Bay/Water use designations. This designation includes a wide range of allowable uses, including, without limitation, hotels/motels, restaurants, and retail and all uses in the Commercial Recreation land use designation are considered activating.
Conservation Open Space	Land and open space primarily reserved for the management of habitat and wildlife conservation and environmental protection. This designation supports the Conservation/Intertidal and Open Bay/Water use designations. This designation allows scientific research, education, and other uses that support environmental protection, creation and restoration.
Institutional/Roadway	Land areas primarily reserved for uses and facilities operated by nonmunicipal government agencies, including land areas and roads devoted to public safety and District regulatory activities.
Marine Sales and Services	Land areas primarily reserved for coastal-dependent marine industry, including boat sales and vessel building and repair services. This designation supports the Marine Services Berthing water use designation. This designation allows other supporting primary and secondary land uses or facilities.
Marine Terminal	Land areas primarily for coastal-dependent marine terminal facilities and uses necessary to operate, support, or maintain terminal operations, goods movement, goods- and cargo-handling, and other coastal-, marine-, and shipping-dependent activities. This designation has functional dependencies on direct access to, or association with, deep-water berthing.
Maritime Services and Industrial	Land areas primarily reserved for heavy industrial activities and facilities with functional dependencies on direct access to, or association with, deep-water berthing or other waterfront berthing, large-scale energy generation, or industrial and manufacturing-related activities. This designation allows other supporting primary and secondary land uses or facilities.
Recreation Open Space	Land areas primarily for visitor-serving, public open spaces that provide public access, public views, activating features, or access to coastal areas. This designation includes golf courses and associated facilities. This designation is complementary to the Recreational Berthing, Conservation/Intertidal, Open Bay/Water and Commercial Recreation use designations.
Sportfishing	Areas dedicated to the operations necessary to accommodate sportfishing and containing the facilities necessary to support this use. This designation allows collocation with other supporting primary and secondary land uses or shoreside facilities.
Visitor-Serving Marine Terminal	Land areas primarily for facilities and uses to accommodate cruise ships, including operation, support, and maintenance of terminal operations; cargo handling; and other coastal-dependent or coastal-related activities. This designation has functional dependencies on direct access to, or association with, deep water berthing. Cruise terminal uses are the priority allowable use type in this designation; other listed uses are allowed only if they do not interfere with cruise terminal operations.

¹ The water and land use descriptions provided in this table correspond with PMPU Table 3.1.4, *Description of Water and Land Use Designations*.

² The refined acreages represent final acreages the District will use for water and land uses.

³ There is no land designated as COS within the boundaries of the proposed PMPU.

Table 3-3 shows a comparison of the existing acres from the certified PMP and the proposed designations and corresponding acres in the proposed PMPU.¹⁰ As part of the planning process to develop the proposed PMPU, water and land use designations were assigned, re-assigned, or removed, which led to the redistribution of acres across those designations. Changes in water and land use designations occurred to better reflect operations of the various use types across Tidelands that are anticipated to continue throughout implementation of the proposed PMPU, and to plan and allow for future uses on the proposed designations as stipulated in each planning district's vision and planned improvements, and the Water and Land Use Element Tables: *Allowable Use Types for Water Use Designations and Allowable Use Types for Land Use Designations* (PMPU Tables 3.1.2 and 3.1.3, respectively). These changes are described in detail for each planning district in Section 3.5.3, *Proposed Planning Districts*. Acreages for individual designations identified in Table 3-3 and each planning district's table of water and land use acreages (Tables 3-4, 3-5, 3-6, 3-8, 3-9, 3-10, 3-11, and 3-12) are rounded to one-hundredth of an acre. Planning district and baywide acreage totals are sums of the rounded individual designation acreages.

Table 3-3. Baywide Water and Land Use Designations

Certified PMP Designations (Existing)	Existing Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Water Use				
Commercial Fishing Berthing	25.38	Commercial Fishing Berthing	29.79	+4.41
Marine Services Berthing	16.69	Marine Services Berthing	15.46	-1.23
Sportfishing Berthing	10.67	Sportfishing Berthing	11.11	+0.44
Recreational Boat Berthing	282.18	Recreational Berthing	332.17	+49.99
Specialized Berthing	153.52	<i>(Consolidated to Industrial and Deep-Water Berthing)</i>	--	--
Terminal Berthing	28.85	<i>(Consolidated to Industrial and Deep-Water Berthing)</i>	--	--
<i>Total Consolidated Industrial and Deep-Water Berthing</i>	182.37	Industrial and Deep-Water Berthing	150.54	-31.83
Open Bay/Water	665.39	Open Bay/Water	749.12 ²	+83.73
Estuary	116.41	<i>(Consolidated to Conservation/ Intertidal)</i>	--	--
Wetlands ¹	101.33	<i>(Consolidated to Conservation/ Intertidal)</i>	--	--
<i>Total Consolidated Conservation/ Intertidal</i>	217.74	Conservation/Intertidal	268.70	+50.96
Harbor Services Water	10.20	<i>(Designation removed from the PMPU)</i>	--	-10.20

¹⁰ Existing acres shown in Table 3-3 have been calculated after the conversion from paper maps to geographic information system [GIS] data.

Certified PMP Designations (Existing)	Existing Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Boat Navigation Corridor	105.63	<i>(Consolidated to Navigation Corridor)</i>	--	--
Ship Navigation Corridor	13.38	<i>(Consolidated to Navigation Corridor)</i>	--	--
<i>Total Consolidated Navigation Corridor</i>	119.01	Navigation Corridor	223.47 ²	+104.46
Boat Anchorage	30.87	<i>(Consolidated to Anchorage)</i>	--	--
Ship Anchorage	27.62	<i>(Consolidated to Anchorage)</i>	--	--
<i>Total Consolidated Anchorage</i>	58.49	Anchorage	150.56 ²	+92.07
Navy Ship Berthing	2.40	<i>(Designation and area removed from the PMPU)</i>	--	-2.40
Navy Small Craft Berthing	7.16	<i>(Designation removed from the PMPU)</i>	--	-7.16
Total Water Use	1,496.35	Total Water Use	1,930.90	+434.55
Land Use				
Commercial Fishing	6.46	Commercial Fishing	7.24	+0.78
Marine Sales and Services	10.45	Marine Sales and Services	8.67	-1.78
Sportfishing	4.11	Sportfishing	4.57	+0.46
Commercial Recreation	283.61	Commercial Recreation	312.88	+29.27
Airport Related Commercial	5.37	<i>(Designation removed from the PMPU and area was redesignated)</i>	--	-5.37
Aviation Related Industrial	11.47	<i>(Designation removed from the PMPU and area was redesignated)</i>	--	-11.47
Industrial Business Park	32.34	<i>(Consolidated to Maritime Services and Industrial)</i>	--	--
Marine Related Industrial	172.88	<i>(Consolidated to Maritime Services and Industrial)</i>	--	--
<i>Total Consolidated Maritime Services and Industrial</i>	205.22	Maritime Services and Industrial	155.89	-49.33
Marine Terminal	64.35	Marine Terminal	105.62	+41.27
<i>(Marine Terminal divided into Marine Terminal and Visitor-Serving Marine Terminal)</i>	--	Visitor-Serving Marine Terminal	12.11	+12.11
Open Space	30.64	<i>(Consolidated to Recreation Open Space)</i>	--	--

Certified PMP Designations (Existing)	Existing Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Park/Plaza	128.09	<i>(Consolidated to Recreation Open Space)</i>	--	--
Golf Course	100.14	<i>(Consolidated to Recreation Open Space)</i>	--	--
City Pump Station	0.75	<i>(Consolidated to Recreation Open Space)</i>	--	--
<i>Total Recreation Open Space</i>	259.62	Recreation Open Space	273.65	+14.03
Wetlands	101.33	<i>(Consolidated to Conservation/Intertidal as a water use)</i>	--	--
Harbor Services Land	4.85	<i>(Consolidated to Institutional/Roadway)</i>	--	--
Streets	144.07	<i>(Consolidated to Institutional/Roadway)</i>	--	--
<i>Total Consolidated Institutional/Roadway</i>	148.92	Institutional/Roadway	133.46	-15.46
Navy Fleet School	27.28	<i>(Designation and area removed from the PMPU)</i>	--	-27.28
Total Land Use	1128.19	Total Land Use	1014.07	--114.12
Total Water and Land Use Designations²	2,624.54		2944.97	+320.43³

¹ Wetlands counted in "Total Land Use" for Existing Acres in certified PMP.

² Certain water parcels had previously been assigned designations in the Certified PMP for informational purposes but were not a part of the District's coastal permitting authority. Pursuant to SB 507, those parcels have since been granted to the District from the California State Lands Commission. Thus for consistency, parcels that had previously been assigned designations in the Certified PMP and have been granted to the District pursuant to SB 507 are proposed to be incorporated into the proposed PMPU area and within the District's coastal permitting authority.

³ The change in total acreage within the proposed PMPU area is due to mapping corrections related to land transactions, within the District's jurisdictions, and several parcels added into the proposed PMPU that were recently granted to the District pursuant to SB507. See planning district discussions in Sections 3.5.3.1 through 3.5.3.10, below.

GIS = geographic information system

Allowable Use Types

Tables 3.1.2 and 3.1.3 of the proposed PMPU identify types of primary and secondary uses allowed, as well as uses that are not permitted, in each of the proposed water and land use designations defined above. Table 3.1.5 of the PMPU provides a description of the allowable uses (see Appendix J). To allow flexibility for development, and concurrently provide greater certainty to the prioritization and protection of certain uses, the proposed "Allowable Use Types" (for both water and land) are identified as primary uses, secondary uses, or not permitted uses, as further described below, with the intent for the primary uses to take precedent over secondary uses:

1. **Primary uses** are the dominant use in a water or land use designation—the primary use(s) for which land or a building is or may be intended, occupied, maintained, arranged, or designed.
2. **Secondary uses** complement primary uses identified in a water and land use designation but are not the preferred use and should not dominate any development site or impede, interfere, or create conflicts with the functionality of the priority primary use. The following requirements

apply to secondary use developments and are summarized from Section 3.1.8 of the proposed PMPU. Refer to Section 3.1.8 for a complete list of considerations and requirements for secondary uses.

- a. Up to 25 percent of the land area, measured as either the total surface area or total gross building area in a development, whichever is greater, may include secondary uses.
 - b. At least 75 percent of the linear waterfront land frontage within a development shall be composed of primary uses.
 - c. Up to 25 percent of the total number of available slips and berthings in a water area (e.g., marina) may be allocated for secondary uses.
3. **Not permitted uses** are uses that are not allowed within a water or land use designation.
 4. **Additional uses** are uses that are currently not listed as a primary use or secondary use in any use designation and may be a permitted use but must be compatible with the water or land use designation for that site and its allowable uses, and treated in the same manner. They must also be an allowed Public Trust use.

3.5.1.2 Mobility Element

The purpose of the proposed Mobility Element is to provide direction for the establishment, maintenance, enhancement, and integration of the travel options to, from, and throughout Tidelands. This element reinforces the District's vision of providing an interconnected mobility network that supports a range of travel modes while also being flexible and adaptable to the future technologies and demands of transportation, transit, parking, cargo, freight, and the U.S. military. Specifically, the focus of this element is to:

- Provide alternative modes of transportation, which could reduce vehicle miles travelled consistent with California's greenhouse gas reduction goals.
- Encourage the improvement and expansion of existing mobility networks to provide users with diverse travel options, including transit, on both water and land.
- Provide efficient cargo transfer points to maintain a sustainable freight network.
- Continue coordination with the Department of Defense to support and maintain the Strategic Port designation that facilitates U.S. military operations on Tidelands.

Proposed mobility modes throughout Tidelands facilitate three key types of movement: the movement of people, goods, and U.S. military forces. These types of movement use both water and land. The District collaborates with adjacent jurisdictions, the airport, and the regional, state, and federal planning agencies for the planning of accessways that provide access to and from Tidelands. The District also serves an important role as a Strategic Port and, when needed, is responsible for movement of military assets.

Proposed policies in this element are focused on the expansion of landside and waterside networks through enhanced links and hubs, and including opportunities to provide alternative modes of transit and the creation of transportation demand management (TDM)—the programs and strategies that manage and reduce vehicle miles traveled (VMT) and traffic congestion and parking demand by encouraging the use of transportation alternatives, such as transit, carpools, biking, walking, and teleworking, and discouraging single-occupancy vehicle trips.

Central to this notion for the movement of people is the proposed creation throughout the Tidelands of an interconnected mobility hub network to serve as connection points where visitors and workers accessing Tidelands are provided the opportunity to change from one mode of travel to another to reach their destinations. These hubs would link landside modes (cars, transit, biking, walking, micromobility options, etc.) and some may also link landside modes to waterside features through three types of mobility hubs (regional, local gateway, and connector). Table 4.1, *Mobility Hub: Accessibility Requirements and Amenities*, of the proposed PMPU's baywide development standards (Chapter 4) defines the various proposed mobility hub types and their accessibility and amenity requirements and Figure 3.2.5 of the PMPU, *Planned Connection Points*, of the Mobility Element, identifies potential locations of mobility hubs, water-based transfer points, and short-term public docking. In addition, the District proposed to expand operation of an existing summertime shuttle service (i.e., bayfront circulator) to create a continuous connection between Shelter Island and the Convention Center on a year-round basis.

The proposed PMPU also identifies goods movement improvements, including, but not limited to the following:

- Truck queuing management.
- Off-peak dedicated lanes that segregate trucks from other vehicles to increase safety.
- Separated dedicated truck lanes that can also be used for transit and military vehicles.
- Freight Signal Priority for freight vehicles.
- Gate Operating System to manage the flow through the terminals' gates.
- Geofencing that tracks the location and path of freight vehicles and can incentive trucks to follow designated or alternative freight routes.

Policies related to a sustainable cargo network focus on coordinating with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable strategies in accordance with both the District's environmental regulations and the State's sustainability objectives.

3.5.1.3 Ecology Element

As a trustee of public lands, the District is responsible for safeguarding its natural resources and the public's access to nature. The purpose of this proposed element is to identify goals, objectives, and policies that serve to enhance, conserve, and restore natural resources and foster a healthy environment. The balance between the natural environment and the built environment is a key consideration in protecting the ecological health and natural resources of the Bay and on Tidelands. This proposed element furthers the District's intentions related to the protection of natural resources and ecological health of Tidelands by building on applicable environmental laws and existing District policies and programs to guide future planning and development, with focus on healthy ecosystems, a clean environment, and collaborative stewardship. The proposed goals, objectives, and policies presented in this element demonstrate the District's commitment as a steward of the environment and its role in supporting a healthy and sustainable ecosystem through:

- Requirements for future development adjacent to or otherwise near environmentally sensitive areas.

- Protection, enhancement, and conservation of biologically diverse resources.
- Pollution prevention and improving the quality of the land, water, and air.
- Enhanced collaboration with local partners on shared priorities.

In addition, proposed policies call for the protection of threatened or endangered species by the establishment and maintenance of ecological buffers, including 100 feet between the landside development and saltmarsh wetland to preserve and protect the wetland habitat for the anticipated life of the development.

3.5.1.4 Safety and Resiliency Element

The proposed Safety and Resiliency Element establishes goals, objectives, and policies to ensure that the District is prepared to respond to natural and human-caused hazards and fulfill its responsibilities to protect and maintain critical infrastructure, public assets, and coastal access. The focus of this element is public safety and security, emergency preparedness and recovery, and climate resiliency. The proposed PMPU describes the District's commitment to safety and resiliency throughout Tidelands in this element, through the following activities:

- Creating and maintaining safe access to and within Tidelands and the Bay.
- Enhancing safety and security features through design and use of the public realm and development.
- Collaborating with adjacent jurisdictions and other partners within the region to effectively mitigate, prepare for, respond to, and recover from emergencies.
- Applying an adaptive management approach to mitigate, prepare for, respond to, and recover from human-caused and natural hazards, including sea-level rise (SLR), through an iterative cycle of planning, monitoring, evaluating, and adapting.

The first part of this proposed element addresses public safety; security and emergency preparedness; and recovery for natural disaster. The second part addresses climate resiliency and identifies the District's strategies related to reducing greenhouse gas emissions and adapting to SLR by using an adaptive management approach, which involves an iterative process of planning, implementing, and modifying strategies for managing resources in the face of uncertainty and change.

3.5.1.5 Environmental Justice Element

The Environmental Justice Element focuses on the disadvantaged communities surrounding the Tidelands, such as the communities of Barrio Logan, Logan Heights, Sherman Heights, and Imperial Beach. The Environmental Justice Element establishes goals, objectives, and policies to ensure that disadvantaged communities, surrounding the District jurisdiction, are afforded equitable opportunity to access Tidelands, participate in District planning and public involvement processes, and enjoy a healthy environment through:

- Improved mobility and transit linkages from adjacent disadvantaged communities throughout Tidelands and additional free and lower cost recreational opportunities.
- Greater opportunities to participate in the District's planning and decision-making processes.

- Reduced pollution in disadvantaged communities to improve those communities' quality of life; ~~and~~
- Enhanced collaboration locally and regionally, as well as deepening relationships with indigenous communities, so that disadvantaged communities near Tidelands and adjacent areas are cleaner and thriving places to work, live, and play.

In addition, the proposed Environmental Justice Element includes policies aimed at reducing land use conflicts between Tidelands and adjacent residential uses, and the Transition Zone Policy (Board of Port Commissioners Policy No. 725), which creates appropriate transition zones between the working waterfront and adjacent residential neighborhoods. These policies serve to:

- Minimize land use conflicts between industrial, working water uses and historical, adjacent residential uses.
- Reduce the cumulative health burdens on neighboring communities.
- Collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in Portside Communities.
- Identify methods for advancing clean air and water programs near Portside Communities.

3.5.1.6 Economics Element

The District supports more than 44,300 jobs, many of which are high paying, and generates close to \$5.6 billion in economic output that continues to grow annually. Therefore, the proposed Economics Element is centered on financial sustainability, thriving businesses, a dedicated work force, and a growing and diverse economic portfolio. It proposes goals, objectives, and policies to ensure that the District supports the economic vitality of the District and the region, with an emphasis on promoting equity and the Tidelands economy. The proposed policies in this element emphasize the District's commitment through:

- Continued strengthening of public and private partnerships.
- Exploration of innovative financing mechanisms.
- Provision of infrastructure to support businesses on Tidelands.
- Encouraging a diverse suite of uses and businesses to operate on Tidelands, which can support local and regional economic prosperity.

Goals, objectives, and policies in this element center on establishing diverse and sustainable revenue sources for reinvestment in the District Public Trust obligations, providing infrastructure to support existing and future industry needs and the environment, ensuring maintenance of the Strategic Port designation, retaining and encouraging a diverse mix of coastal-dependent and coastal-related industries and businesses, encouraging recreational activities and coastal-enhancing industries to create a vibrant waterfront, creating and maintaining programs and services that address the needs of the District's business community; and attracting and supporting innovating and emerging industries. In addition, this element identifies the District's intentions related to ocean-related enterprises, referred to as the "blue economy," including, for example, shipbuilding and repair, commercial and recreational fishing, and environmental stewardship for coastal and marine resources. The region's scientific community and growing technology economy has contributed to

a blue economy and unique marine technology cluster. As discussed in this element, the District plans to continue to invest in infrastructure and new enterprises to help grow and diversify the blue economy portfolio on Tidelands.

3.5.2 Baywide Development Standards

Chapter 4 of the PMPU establishes proposed baywide development standards, which are requirements that are meant to be applied consistently baywide throughout the individual planning districts. The proposed baywide development standards propose rules for the physical development of property, such as building heights and setbacks, particularly related to view corridors, scenic areas, waterside areas, and recreational open space areas. The baywide development standards are intended to enliven and enrich the Tidelands experience for visitors, businesses, and workers, and will be used to implement new development in a manner that is consistent with the surrounding pattern and character of development.

The proposed baywide development standards will be applied consistently to future development in all planning districts, except where specifically noted in a subdistrict development standard. In addition to compliance with the baywide development standards, the proposed PMPU requires that all future development must conform to the subdistrict development standards described in Chapter 5, *Planning Districts*, of the PMPU. The proposed Baywide Development Standards specifically address the following topic areas.

- **Mobility Hubs** – The proposed PMPU defines the proposed standards for each of the three types of mobility hubs, including land use and siting standards, public access standards, and amenities. Details of these standards are provided in Section 4.1 of the PMPU (Appendix J). All mobility hubs proposed in the planning districts or subdistricts in the proposed PMPU must be in accordance with the respective mobility hubs requirements (e.g., Regional, Local Gateway, or Connector) included in this section.
- **Recreation Open Space and Activating Features** – Proposed development standards for recreation and open space include siting standards (e.g., be located directly adjacent to the waterfront or be visually accessible from grade for rooftop open spaces) and, where applicable, requirements for landscaping, amenities or activities, and public access. Proposed development standards for activating features identify the frequency and intensity of these features as well as specific location, design, and parking criteria for pavilions. Activating features include recreational uses, such as fitness activities and play structures, moveable kiosks or carts, or pavilions. Details of these standards are provided in Section 4.2 of the proposed PMPU (Appendix J).
- **Pathways** – Proposed pathway standards identify the requirements for waterside promenades, including walkways, and amenity zones. Standards for waterside promenades include requirements for which types of development must provide a waterside promenade, minimum width, and design. The proposed development standards also identify criteria for the provision of amenity zones, which the proposed PMPU defines as an area intended to improve comfort, convenience, or enjoyment by providing a variety of facilities or street furnishings, such as pedestrian seating, trash receptacles, and signage. In addition, they identify standards for walkways with the intent to create a pedestrian sense of scale along the waterfront and to avoid a walling-off effect. Details of these standards are provided in Section 4.3 of the proposed PMPU (Appendix J).

- **Views** – The proposed PMPU defines view standards for scenic vistas and view corridor extensions, including what features may be allowed or prohibited within the viewsheds of a scenic vista or view corridor extension and the siting and design of new development occurring adjacent to the viewsheds. Details of these standards are provided in Section 4.4 of the proposed PMPU (Appendix J).
- **Structure Height, Setback, and Stepback Standards** – The proposed standards identify requirements for measuring structure height, as well as the requirements related to Regional Airport Land Use Compatibility and Federal Aviation Administration notification. Proposed setback and stepback standards are also defined to allow for implementation of parkways and sidewalks and to ensure a pedestrian scale is maintained. Details of these standards are provided in Section 4.5 of the proposed PMPU (Appendix J).
- **Wayfinding Signage** – Standards related to wayfinding signage identify location and design standards for signage and appropriate use for wayfinding signage (i.e., should be used for informational purposes and not advertising, etc.). Details of these proposed standards are provided in Section 4.6 of the proposed PMPU (Appendix J).

3.5.3 Proposed Planning Districts

As discussed above, the District’s jurisdiction is divided into 10 planning districts that group Tideland properties into identifiable and functional units, eight of which are being amended as part of the proposed PMPU.¹¹ Planning district boundaries conform closely to those of established municipal jurisdictions following logically grouped geographic areas. Chapter 5 of the proposed PMPU has a section devoted to each planning district. For each proposed planning district, the proposed PMPU includes the following:

- Existing Setting
- Location and Context Map
- Water and Land Use Acreages
- Water and Land Use Map
- Coastal Access: Mobility Map
- Coastal Access: Views and Pathways Map

In addition, most of the planning districts are further divided into proposed subdistricts to provide descriptions and standards applicable to smaller and distinct geographic areas. Discussions of the subdistricts are organized as follows:

- Vision – describes the long-term vision and character for the subdistrict.
- Special Allowances – addresses unique situations for the subdistrict.
- Planned Improvements – identifies anticipated development or improvements (which includes identifying development of an appealable category) for each subdistrict (see footnote #3 in Section 3.1, *Introduction*, for the definition of appealable projects per CCA Section 30715). The planned improvements are based on multi-year planning and extensive outreach with

¹¹ As noted above, PD5 and PD6, and the Pond 20 portion of PD7 are not part of the PMPU as they have separate comprehensive development plans underway (i.e., PD5, Pond 20 of PD7) or approved (i.e., PD6).

stakeholders and residents in the region, and the build-out of these projections would be subject to feasibility studies, economic conditions, and site-specific analyses.

- Development Standards – requirements for development including size, location, siting, and orientation of the required public realm features, buildings, and structures.¹²

The following sections summarize the vision, special allowances, planned improvements, and development standards for each planning district.

In addition, for the purposes of the analysis in this Draft PEIR, the construction and operation of future development that may occur indirectly,¹³ should the proposed PMPU be approved and implemented, must be estimated to analyze the whole of the action. These buildout projections, which are identified in Table 3-4, are based upon written policy language in the individual planning districts of the PMPU. Because the PMPU does not propose any specific development project and the timing, location, and characteristics of the increase in future development allowed under the PMPU is not yet known, this PEIR analyzes the potential environmental impacts that may result from full buildout of the increased development allowed under the PMPU by the planning horizon year of 2050. This buildout scenario also assumes the associated infrastructure required to implement the planned improvements. Individual future development projects allowed under the PMPU will be subject to further environmental review pursuant to State CEQA Guidelines Section 15168 when site-specific development applications are submitted to the District.

Moreover, future development that is not currently anticipated in the planned improvements or the planning district's Vision may still occur. Such development would need to be consistent with the water or land use designation for the proposed development site, as described in Table 3.1.4, *Description of Water and Land Use Designations*, of the PMPU, as well as the goals, objectives, and policies of the proposed PMPU, baywide development standards, and the development standards established for each planning district, which by extension would be consistent with the Port Act and CCA.

Table 3-4. Baywide Development Projections

Use	Planned Net New ¹
Water Use	
Anchorage (moorings)	75
Commercial Fishing Berthing (slips)	65
Institutional Berthing (slips)	0

¹² As stated in the proposed PMPU and Section 3.5.2, *Baywide Development Standards*, it is proposed that all development in each subdistrict shall comply with the subdistrict's Development Standards, as well as the standards identified in Chapter 4, *Baywide Development Standards*, of the PMPU. The subdistrict Development Standards may be an extension of, or a supplement to, a specific baywide element policy, or a standard identified in Chapter 4. Accordingly, proposed subdistrict Development Standards may refer to, and therefore receive guidance from, a specific element policy, or standard in Chapter 4. Where a proposed exception to a standard identified in Chapter 4 is applicable to a specific location, it is noted in the relevant subdistrict standard.

¹³ Development that occurs consistent with the PMPU would be considered an indirect consequence of the proposed PMPU's approval and implementation. While the PMPU plans for future development, it would not actually propose any of the future development itself for implementation. Any such proposals would occur after the PMPU's approval and would not include any assurance of being approved and implemented as such approvals would be subject to environmental review pursuant to State CEQA Guidelines Section 15168 and to future discretionary decisions by the District's Board.

Use	Planned Net New¹
Marine Services Berthing (slips)	0
Recreational Berthing (slips)	485
Sportfishing Berthing (slips)	0
Total - Waterside Development	575
Land Use	
Hotels (rooms; without associated retail/restaurant)	0
Hotels (rooms; with associated retail/restaurant)	3,910
Meeting Space (sf)	162,000
Retail (sf)	92,250
Restaurant (sf)	89,750
Standalone Retail/ Restaurant (sf)	67,489
Convention (sf)	180,000
Total - Landside Development Use	
<i>Hotel Rooms</i>	<i>3,910</i>
Meeting Space (sf)	<i>162,000</i>
Retail/Restaurant (sf)	<i>340,000</i>
Convention (sf)	<i>180,000</i>

¹Net new proposed development is calculated based on the allowable Planned Improvements located in each planning district or subdistrict. The Planned Improvements are appealable and non-appealable development or improvements for each subdistrict, which are described for each planning district below.

sf = square feet

3.5.3.1 Planning District 1: Shelter Island

The Shelter Island Planning District (PD1) is located on the southeastern side of the Point Loma Peninsula, at the entrance to the Bay, near vibrant upland communities, military installations, and the Cabrillo National Monument. Defined by the unique shape of the land, this planning district includes a total of 322.8 acres, with 206.3 acres of water and 116.5 acres of land and has two subdistricts: West Shelter Island and East Shelter Island. A variety of existing uses, such as commercial fishing, sportfishing, recreational berthing, marine sales and services, and commercial recreation, are found in this planning district.

Proposed Water and Land Use Designations

Proposed water and land use designations for PD1, as well as the proposed acreages of each, are provided in Table 3-5. As shown, proposed water use designations would include Anchorage, Commercial Fishing Berthing, Marine Services Berthing, Navigation Corridor, Open Bay/Water, Recreational Berthing, and Sportfishing Berthing. Proposed land use designations include Commercial Fishing, Commercial Recreation, Institutional/Roadway, Marine Sales and Services, Recreation Open Space, and Sportfishing. The proposed water and land use map for PD1 is provided as Figure 3-2.

Table 3-5. Shelter Island Planning District Water and Land Use Designations (Certified PMP and Proposed PMPU)

Certified PMP Designations (Existing)	Existing Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Water Use				
Commercial Fishing Berthing	6.61	Commercial Fishing Berthing	11.08	+4.47 ¹
Marine Services Berthing	16.69	Marine Services Berthing	15.46	-1.23
Recreational Boat Berthing	103.28	Recreational Boat Berthing	103.74	+0.46
Sportfishing Berthing	10.59	Sportfishing Berthing	11.11	+0.52
Navy Small Craft Berthing	7.16	<i>(Designation and some acreage not carried forward in the PMPU; remaining acreage redistributed to other designations)</i>	--	-7.16 ²
Open Bay/Water	45.54	Open Bay/Water	62.25	+16.71 ^{3,5}
Harbor Services	4.16	<i>(Designation not carried forward in the PMPU and acreage redistributed to other designations)</i>	--	-4.16 ⁴
Boat Navigation Corridor	3.97	Navigation Corridor	108.45	+104.48 ⁵
Boat Anchorage	1.47	Anchorage	36.45	+34.98 ⁵
Navy Ship Berthing	2.4	<i>(Designation and acreage removed in PMPU)</i>	--	-2.40 ⁶
Total Water Use	201.87	Total Water Use	348.53	+146.66
Land Use				
Commercial Fishing	2.47	Commercial Fishing	2.48	+0.01
Commercial Recreation	53.57	Commercial Recreation	54.04	+0.47
Marine Sales and Service	10.45	Marine Sales and Service	8.67	-1.78
Sportfishing	4.11	Sportfishing	4.57	+0.46
Open Space	7.21	<i>(Consolidated to Recreation Open Space)</i>	--	--
Park/Plaza	18.77	<i>(Consolidated to Recreation Open Space)</i>	--	--
<i>Total Consolidated Recreation Open Space</i>	<i>25.98</i>	Recreation Open Space	28.90	+2.92
Harbor Services Land	2.10	<i>(Consolidated to Institutional/Roadway)</i>	--	--
Streets	22.42	<i>(Consolidated to Institutional/Roadway)</i>	--	--
<i>Total Consolidated Institutional/Roadway</i>	<i>24.52</i>	Institutional/Roadway	17.80	-6.72 ⁷
Navy Fleet School	27.28	<i>(Designation and acreage removed in PMPU)</i>	--	-27.28 ⁶

Certified PMP Designations (Existing)	Existing Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Total Land Use	148.38	Total Land Use	116.45	-31.93

¹ Additional acreage from redistribution of Navy Small Craft Berthing.

² Reduced acreage from elimination of designation and some of the area from the PMP; remaining acreage redistributed to Commercial Fishing Berthing.

³ Additional Open Bay/Water acreage from redistribution of Harbor Services.

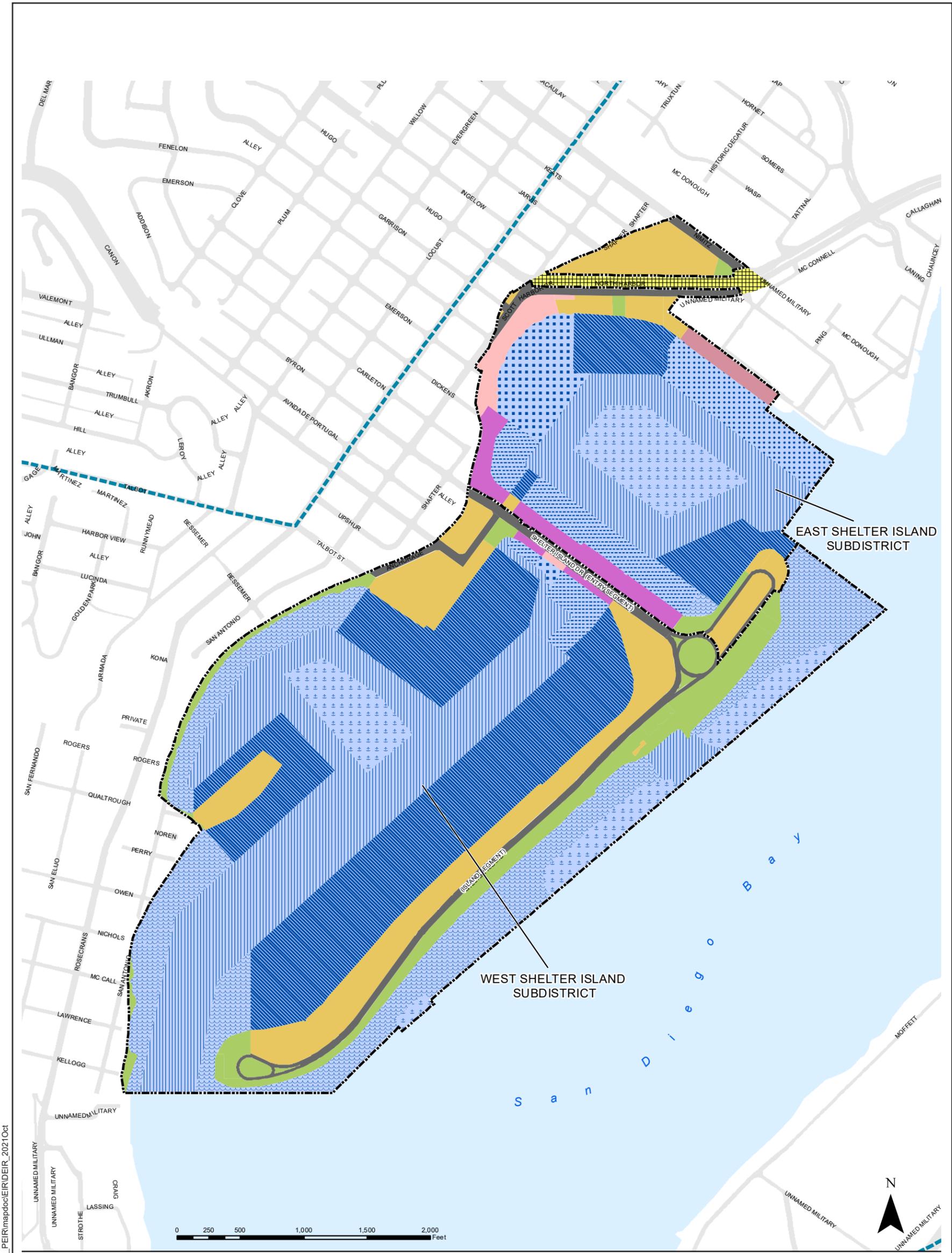
⁴ Reduced acreage from redistribution to Open Bay/Water.

⁵ Certain water parcels had previously been assigned designations in the Certified PMP for informational purposes but were not a part of the District's coastal permitting authority. Pursuant to SB 507, those parcels have since been granted to the District from the California State Lands Commission. Thus, for consistency, parcels that had previously been assigned designations in the Certified PMP and have been granted to the District pursuant to SB 507 are proposed to be incorporated into the PMPU area and within the District's coastal permitting authority. In PD1, this includes additional Navigation Corridor, Anchorage, and Open Bay/Water parcels in West Shelter Island, and additional Navigation Corridor and Anchorage parcels in East Shelter Island.

⁶ Reduced acreage from removal of designation and corresponding acreage from the proposed PMPU area.

⁷ Reduced acreage from redesignation of Harbor Services Land to Commercial Recreation and removal of Harbor Services Land and Streets designation in East Shelter Island (identified as "Not Within District Permitting Authority").

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JURISDICTIONAL BOUNDARIES

- Planning Subdistricts
- Coastal Zone
- Not Within District Permitting Authority

LAND USE DESIGNATIONS

- Commercial Fishing
- Commercial Recreation
- Institutional / Roadway
- Marine Sales and Services
- Recreation Open Space
- Sportfishing

WATER USE DESIGNATIONS

- Anchorage
- Commercial Fishing Berthing
- Marine Services Berthing
- Navigation Corridor
- Open Bay / Water
- Recreational Berthing
- Sportfishing Berthing

Figure 3-2
PD1: Shelter Island Water and Land Use Map
Port Master Plan Update



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West Shelter Island Subdistrict

The West Shelter Island Subdistrict includes the water and land area from the west of Shelter Island Drive to the western end of Shelter Island/Kellogg Street, including the La Playa Trail adjacent to the Point Loma neighborhood (see Figure 3-2).

Vision

The vision for West Shelter Island is to celebrate the maritime and coastal character, and honor its connection with the water by preserving its unique mix of coastal uses, activities, and access, with an emphasis on maintaining thriving maritime and recreational opportunities. The proposed intensity of commercial development is not planned to change over the life of the proposed PMPU. Proposed future development and planned improvements are intended to further enhance and enliven the area, consistent with this subdistrict's character and scale of development.

Special Allowances

La Playa Piers

The four existing piers within the West Shelter Island subdistrict are proposed to remain, and over water coverage will not be expanded. The piers will be accessible to the public daily from sunrise to sunset, and may have security gates to control access outside of these required time frames for public accessibility. Signs are proposed that indicate availability for public use and such signs will be clearly posted on the landward portion of the pier for all piers retained. Gangways and docks on these four piers may remain closed to the public (see Figure PD1.5, *Major Components of a Pier*, in Appendix J). The pier at the La Playa Yacht Club may remain in the capacity of its current use. No new quasi-private/quasi-public piers or docks associated with residential properties, or residential use, are proposed and will be explicitly disallowed.

Planned Improvements

Planned improvements for West Shelter Island target improved landside and coastal access. Specifically, the proposed PMPU would plan for mobility hubs, including a Connector Mobility Hub on the western portion of Shelter Island Drive, near the Shelter Island Pier, and a Local Gateway Hub at the Shelter Island Yacht Club (near the intersection of Anchorage Lane and Shelter Island Drive), which would provide wayfinding and pathway connections to the potential water-based transfer point in the West Basin, when established. Planned improvements in this subdistrict also propose development and operation of a bayfront circulator to provide connections between Shelter Island, Harbor Island, and the Embarcadero Planning District.

Roadway improvements are proposed that would involve enhancements to the public realm by updating and improving signage, creating wide sidewalks, and removing obstacles to improve visibility and create safe pedestrian crossings facilities; and enhancements to and reconfigurations along Shelter Island Drive by narrowing to two general travel lanes, reconfiguring off-street parking, and creating a multi-use path, in order to allow the expansion of the waterside promenade and Recreation Open Space, and the provision of a series of garden spaces, an amenity zone, and up to five activating features. The proposed PMPU also proposes the addition of an activating feature at the intersection of Anchorage Lane and Shelter Island Drive, and enhancements to pedestrian crossings and pedestrian access throughout the subdistrict. La Playa Trail would remain and be

maintained and improved for the benefit of public access and natural resources, as a nature trail with a variable width. The La Playa Trail trailhead would be enhanced with minimal activating features such as benches and the existing cultural markers would remain.

Coastal access enhancements include modification or replacement of the existing water-based transfer point at the Shelter Island Pier, as well as the development of up to four water-based transfer points throughout the subdistrict. Improvements are also proposed for existing short-term public docking, marina facilities, launch areas, the Shelter Island Boat Launch, and anchorages.

While the proposed PMPU plans allows modifications to, or replacement in-kind of, existing retail and/or restaurant, existing hotel rooms, including associated retail or restaurant space, the proposed PMPU does not include an increase in the number of hotel rooms allowed in this subdistrict.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These appealable projects are described below.

Appealable Projects

The proposed PMPU plans for the following appealable projects for the West Shelter Island subdistrict:

- Develop up to four additional short-term public docking slips in association with recreational marina-related facilities, provided there is no net increase in slips within the subdistrict.
- Allow for modifications to moorings to accommodate a cumulative increase of up to 10 moored vessels at existing Shelter Island Anchorages, including the A-1, A-1a, A-1b, and A-1c anchorage areas, provided the boundaries of each of the anchorages do not change, and there is no unmitigated increase in shading or fill.

Development Standards

Proposed public realm standards include the provision of a continuous waterside promenade and walkways to enhance physical access to the waterfront. View corridor extensions are also proposed at Bessemer Street, Nichols Street, and McCall Street; and the development standards propose scenic vistas at the following locations:

- View of the Bay, from Kellogg Beach.
- View of the La Playa waterfront from the entrance to the Southwestern Yacht Club leasehold, immediately adjacent to Qualtrough Street.
- View of the Shelter Island Yacht Basin from the La Playa trailhead.
- View of the Shelter Island Yacht Basin from the water's edge near Shelter Island Drive at Anchorage Lane.
- View of the Bay from Shelter Island Shoreline Park, north of Anchorage A-1c.
- View of the Bay from Shelter Island Park near Shelter Island Pier.
- View of the Bay and Pacific Ocean from Shelter Island Point.

Building standards propose that structures not exceed 30 feet in height.

East Shelter Island Subdistrict

The East Shelter Island Subdistrict includes the water and land area from the east of Shelter Island Drive, including the America's Cup Harbor and the immediately adjacent landside area bounded by North Harbor Drive, except for an additional triangular area bounded roughly by Shafter Street on the north and Nimitz Boulevard on the east (see Figure 3-2).

Vision

The vision for East Shelter Island proposes continued support for the area's boating and fishing communities, integrated with visitor-serving uses. This is envisioned to include improved public access through enhanced mobility and pedestrian connections, to allow workers and visitors to safely work in and explore the area. The PMPU proposes enabling the development of new opportunities that will complement the commercial fishing and sportfishing industries, and promote recreational boating, as well as modernize the commercial fishing, sportfishing, and recreational boating facilities. The intensity of commercial development is not planned to substantially increase. Planned improvements are intended primarily to further enhance and enliven the area, consistent with the subdistrict's character and scale of development.

Special Allowances

No special allowances are proposed for East Shelter Island.

Planned Improvements

Planned improvements for East Shelter Island target improvements related to landside and coastal access. Specifically, the proposed PMPU plans for a Connector Mobility Hub south of North Harbor Drive with wayfinding and pathway connections to connect the existing water-based transfer points and existing short-term public docking south of the North Harbor Drive and adjacent to Point Loma Marina Park. As noted in the West Shelter Island *Planned Improvements* subsection, development and operation of a bayfront circulator is proposed to provide connections between Shelter Island, Harbor Island, and the Embarcadero Planning District. Proposed roadway improvements would include enhancement of pedestrian crossing throughout the subdistrict and the development of a multi-use path to connect Shelter Island to Spanish Landing Park located in the Harbor Island Planning District.

Proposed coastal access enhancements include modification or replacement of the existing water-based transfer points and existing short-term public docking adjacent to Point Loma Marina Park, at the opening of America's Cup Harbor, and at America's Cup Harbor near the intersection of Anchorage Lane and Shelter Island Drive. In addition, the proposed PMPU plans for the development of a new water-based transfer point for small recreational watercraft. Coastal access planned improvements could also include modification or replacement of existing commercial fishing marina facilities and existing recreational marina-related facilities, including sportfishing facilities.

While the proposed PMPU would allow modifications to, or replacement in-kind of, existing hotel rooms, including associated retail or restaurant space, the PMPU does not plan for the addition of new hotels rooms in this subdistrict. Similarly, modifications to, or replacement in-kind of, existing retail and/or restaurant space would be allowed to the same or lesser size facilities and in the same general footprint.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

Of the planned improvements for East Shelter Island, the following are appealable projects:

- Modify North Harbor Drive to accommodate vehicular traffic, pathways, and bikeways.
- Modify Nimitz Boulevard to accommodate vehicular traffic, pathways, and bikeways.
- Allow development of up to two additional short-term public docking slips, in association with recreational marina-related facilities.
- Allow for development up to 35 additional recreational boat berthing vessel slips in association with existing recreational marina-related facilities in this subdistrict, to allow for the accommodation of various-sized vessels.
- Allow for modifications to moorings to allow for an increase of up to 20 moored vessels at America's Cup Harbor Anchorage (A-2) provided the boundaries of the anchorage do not change and there is no unmitigated increase in shading or fill.
- Allow development of up to 65 additional commercial fishing berthing vessel slips in association with commercial fishing marina-related facilities in this subdistrict, to allow for the accommodation of various-sized vessels.

Development Standards

Proposed public realm standards include the provision of a continuous waterside promenade and walkways to enhance physical access to the waterfront. View corridor extensions are also proposed at Garrison Street and Dickens Street, and the development standards would establish scenic vistas at the following locations:

- View of America's Cup Harbor and the Bay from Point Loma Marina Park.
- View of America's Cup Harbor from the point of East Shelter Island.

Building standards propose that structures must not exceed 30 feet in height, that all non-water-oriented uses located along Shelter Island Drive, between Anchorage Lane and the Shelter Island Roundabout, must orient the building's primary frontage along Shelter Island Drive, and that buildings must be oriented in a manner that promotes the public visibility of waterside sportfishing and commercial fishing activities.

3.5.3.2 Planning District 2: Harbor Island

Located just north of Downtown San Diego and south of San Diego International Airport (SDIA), the Harbor Island Planning District (PD2) is a prominent entry point to San Diego and downtown San Diego, introducing the area as a quality destination to visit and inviting people to enjoy District Tidelands. PD2 includes 382.8 total acres, with 195.08 acres of water area and 187.74 acres of land area. PD2 is divided into four proposed subdistricts: Spanish Landing, West Harbor Island, East Harbor Island, and the Pacific Highway Corridor. The four proposed subdistricts include park and open space area, pedestrian and bicycle pathways, and recreational marinas. Visitor-Serving Recreation Commercial uses also comprise much of PD2, with large surface parking lots occupying

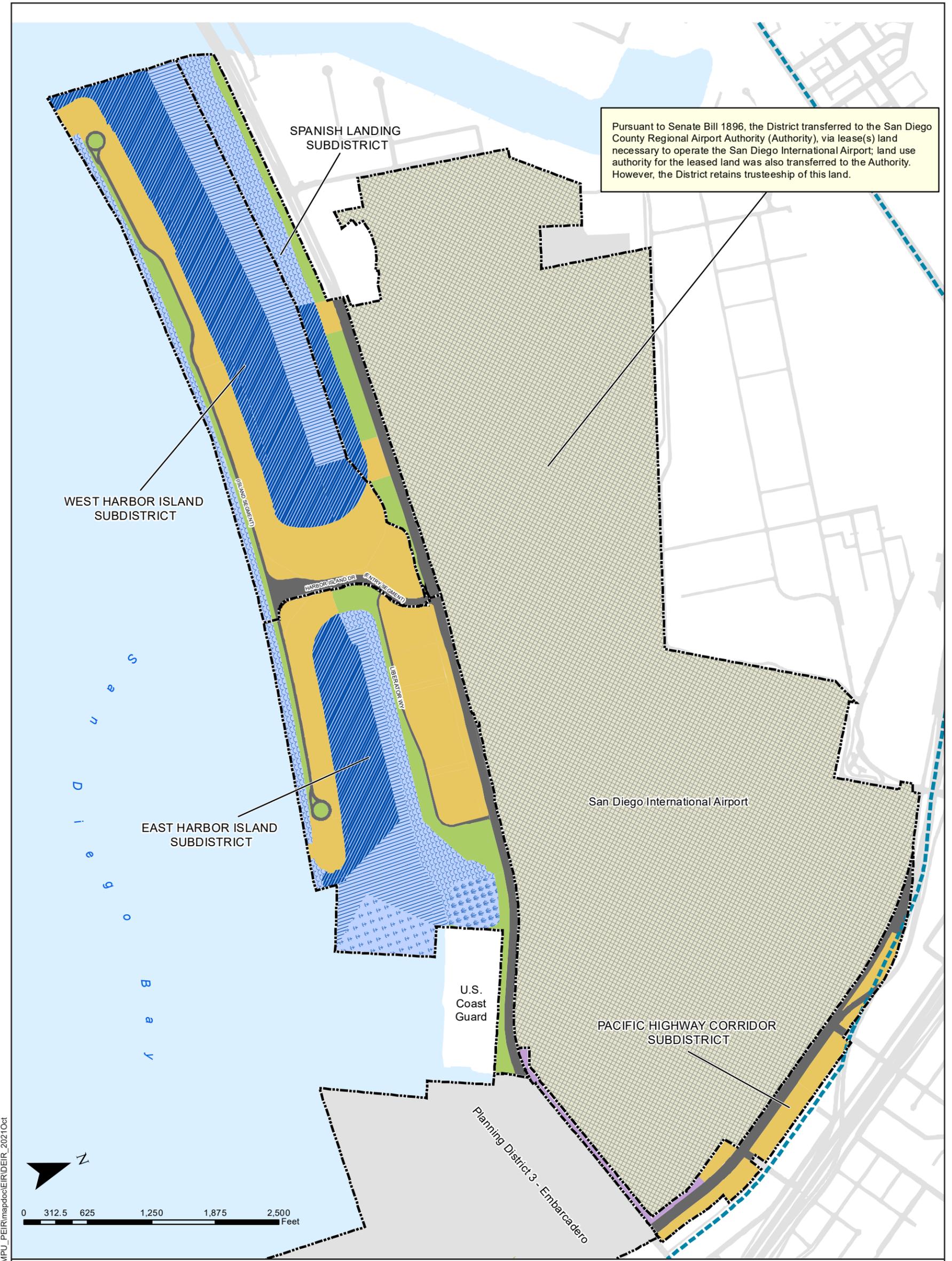
areas within East Harbor Island and the Pacific Highway Corridor. The Pacific Highway Corridor subdistrict also includes the District's existing Administration Building.

While PD2 also includes the SDIA, and the District retains trusteeship of this land, this subdistrict, including all land uses, activities, and improvements, is under the land use authority of the San Diego County Regional Airport Authority and the California Coastal Commission; and the proposed PMPU does not provide policies or identify planned improvements for this area. Future development planned for and associated with the SDIA is included in the cumulative impact analysis provided in Chapter 4, *Environmental Analysis*.

Proposed Water and Land Use Designations

Proposed water and land use designations as well as the proposed acreages of each water and land use designation are provided in Table 3-6. As shown, water use designations would include Anchorage, Navigation Corridor, Open Bay/Water, and Recreational Berthing. Proposed land use designations would include Commercial Recreation, Institutional/Roadway, Maritime Services and Industrial, and Recreation Open Space. The proposed water and land use map for PD2 is provided on Figure 3-3.

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JURISDICTIONAL BOUNDARIES

- Planning Subdistricts
- Coastal Zone
- San Diego International Airport - Not Within District Permitting Authority

LAND USE DESIGNATIONS

- Commercial Recreation
- Institutional / Roadway
- Maritime Services and Industrial
- Recreation Open Space

WATER USE DESIGNATIONS

- Anchorage
- Conservation / Intertidal
- Navigation Corridor
- Open Bay / Water
- Recreational Berthing

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Figure 3-3
PD2: Harbor Island Water and Land Use Map
Port Master Plan Update

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Table 3-6. Harbor Island Planning District Water and Land Use Designations

Certified PMP Designations (Existing)	Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Water Use				
Recreational Boat Berthing	90.5	Recreational Boat Berthing	98.90	+8.40
Specialized Berthing	11.9	<i>(Designation removed in the PMPU, and acreage distributed to other designations)</i>	0.00	-11.9
Boat Anchorage	--	Anchorage	9.08	+9.08 ¹
Open Bay/Water	38	Open Bay/Water	42.50	+4.50 ²
Harbor Services	6.04	<i>(Designation removed in the PMPU, and acreage distributed to other designations)</i>	--	-6.04
Boat Navigation Corridor	10.2	Navigation Corridor	48.60	+38.40 ¹
--	--	Conservation/Intertidal	5.02	+5.02 ²
Total Water Use	156.57	Total Water Use	204.09	+47.52
Land Use				
Airport Related Commercial	5.37	<i>(Designation and acreage removed in the PMPU)</i>	--	-5.37 ³
Commercial Recreation	53.30	Commercial Recreation	105.66	+52.36 ³
Aviation Related Industrial	11.47	<i>(Designation and most acreage not carried forward in the PMPU)</i>	--	-11.47 ³
Industrial Business Park	32.34	Maritime Services and Industrial	4.06	-28.28 ³
Open Space	17.49	<i>(Consolidated to Recreation Open Space)</i>	--	--
Park/Plaza	20.76	<i>(Consolidated to Recreation Open Space)</i>	--	--
<i>Total Consolidated Recreation Open Space</i>	38.25	Recreation Open Space	37.47	-0.78 ⁴
Harbor Services Land	2.62	<i>(Consolidated to Institutional/Roadway)</i>	--	--
Streets	43.85	<i>(Consolidated to Institutional/Roadway)</i>	--	--
<i>Total Consolidated Institutional/Roadway</i>	46.47	Institutional/Roadway	40.56	-5.91 ⁵
Total Land Use	187.20	Total Land Use	187.74	+0.54

¹ Certain water parcels had previously been assigned designations in the Certified PMP for informational purposes but were not a part of the District's coastal permitting authority. Pursuant to SB 507, those parcels have since been granted to the District from the California State Lands Commission. Thus, for consistency, parcels that had previously been assigned designations in the Certified PMP and have been granted to the District pursuant to SB 507 are proposed to be incorporated into the PMPU area and within the District's coastal permitting authority. In PD2, this includes additional Navigation Corridor parcels in West Harbor Island, and additional Navigation Corridor and Anchorage parcels in East Harbor Island.

²Additional acreage from redistribution of Harbor Services.

³Additional Commercial Recreation acreage from redistribution of Aviation Related Industrial, Airport Related Commercial, Industrial Business Park, and some Park/Plaza.

⁴Reduced acreage from redistribution to Commercial Recreation.

⁵Reduced acreage from redistribution to Recreation Open Space.

West Harbor Island Subdistrict

The West Harbor Island Subdistrict includes the water and land area north of the Harbor Island Drive entry segment and south of the Spanish Landing Subdistrict, including the area to the west of Harbor Island Drive (see Figure 3-3).

Vision

The proposed vision for the West Harbor Island Subdistrict is to create a premier, visitor-serving destination welcoming visitors to San Diego. The District envisions increased intensity of commercial development with new hotel rooms, retail and restaurant space, and attractions in West Harbor Island, providing greater opportunities for visitors to explore and enjoy the area. Future mobility improvements will enhance connections to, from, and through the subdistrict with dedicated bikeways, a mobility hub, and integration of the bayfront circulator.

Special Allowances

No special allowances are proposed for this subdistrict.

Planned Improvements

Proposed landside access planned improvements for West Harbor Island include the development of a Local Gateway Mobility Hub on the western portion of Harbor Island Drive, as generally depicted on Figure PD2.3 of the proposed PMPU. The mobility hub would provide wayfinding and pathway connections to link to the existing water-based transfer point near the western portion of Harbor Island Drive, on the basin side of the subdistrict.

In addition, a bayfront circulator is proposed to be developed, as generally depicted on Figure PD2.3 of the proposed PMPU, to provide connections between the Shelter Island, Harbor Island, and Embarcadero Planning Districts. The bayfront circulator may be phased so that it starts during the summer months and, if demand warrants, will then be expanded during other times of the year.

An entry gateway is proposed on or adjacent to Harbor Island Drive (Entry Segment) at the entrance to West Harbor Island, welcoming visitors and highlighting the unique visitor-serving, public access, and recreational opportunities available on Harbor Island. North Harbor Drive would be modified in coordination with other agencies, by developing a multi-use path along the south side of North Harbor Drive, as generally depicted on Figure PD2.4 of the proposed PMPU, adjacent to the dedicated transit lane, to ultimately connect to the Shelter Island and Embarcadero Planning Districts. (See the appealable projects list below for additional proposed modifications to North Harbor Drive.)

The east-west portion of Harbor Island Drive (Island Segment) is proposed to be modified (see the concept shown as Figure PD2.6 of the proposed PMPU) and may include narrowing Harbor Island Drive to two or three general travel lanes to accommodate vehicular traffic; reconfiguring off-street public parking as diagonal parking, to increase on street parking supply and avoid loss of existing public parking unless parking is provided in the Local Gateway Mobility Hub as described in Planned Improvement PD2.1 in Section 5.2.2(C)-I of the proposed PMPU; incorporating high-visibility

crosswalks in alignment with walkways and at intersections, including controlled crossings and curb extensions to reduce crossing distances; and, upon reconfiguration of Harbor Island Drive, expanding and activating Recreation Open Space as described in Planned Improvement PD2.7 in Section 5.2.2(C)-I of the proposed PMPU.

Upon reconfiguration of Harbor Island Drive, as described in PMPU Planned Improvement PD2.6 and illustrated on PMPU Figure PD2.6 of the proposed PMPU, the Recreation Open Space is proposed to be expanded and improved (potentially in phases), which may include an expanded waterside promenade, a series of garden spaces; an amenity zone landside of the waterside promenade; and up to five activating features, three of which may be pavilions, in accordance with the requirements of Chapter 4 of the proposed PMPU.

The existing water-based transfer point at the western portion of Harbor Island Drive, on the basin side of the subdistrict, is proposed to be modified, or replaced in-kind, as generally depicted on Figure PD2.3 of the proposed PMPU, and development of a water-based transfer point at the northeast side of the West Basin is proposed.

Existing recreational marina-related facilities in the West Basin of Harbor Island are proposed to be modified or replaced in-kind, provided there would be no unmitigated increase in shading or fill.

Upon reconfiguration of Harbor Island Drive (see Planned Improvements PD2.6 and PD2.7 in Section 5.2.2(C)-I of the proposed PMPU), the PMPU plans for step-down areas that may be integrated into the area between the Scenic Vista Areas depicted on Figure PD2.4 of the proposed PMPU to offer direct, physical access to the water, and enable the public to touch the water. Step-down areas would be integrated into the design of adjacent Recreation Open Space areas as well.

The PMPU also allows for modification or replacement in-kind of existing retail and/or restaurant, to the same or lesser size, and in the same general footprint in the Commercial Recreation-designated area along Harbor Island Drive (Entry Segment and Island Segment).

Planned improvements for visitor-serving commercial uses include development of up to 25,000 additional square feet of restaurant space, which could be substituted for development of up to 25,000 square feet of retail and/or retail with restaurant space as indicated in the *Appealable Projects* section below, in the Commercial Recreation-designated area along Harbor Island Drive (Entry Segment and Island Segments).

The PMPU also allows for modification or replacement in-kind of existing hotel rooms, including associated retail, restaurant, and/or meeting space, to the same or lesser size, and in the same general footprint in the Commercial Recreation-designated area along Harbor Island Drive (Entry Segment and Island Segment).

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable projects for the West Harbor Island subdistrict:

- Modify North Harbor Drive, in coordination with other agencies, by narrowing North Harbor Drive to four general travel lanes to accommodate vehicular traffic and providing a dedicated transit lane along the south side of North Harbor Drive, east of Harbor Island

Drive, to support a bayfront circulator or other transit options. The dedicated transit lane is planned to ultimately provide a connection between the SDIA and the San Diego Convention Center.

- Modify Harbor Island Drive (Entry Segment) to accommodate:
 - Vehicular traffic, pathways, bikeways, and other improvements, including new signage welcoming visitors to San Diego and Harbor Island;
 - An arrival gateway at the intersection of Harbor Drive and Harbor Island Drive;
 - Pedestrian connections between North Harbor Drive and Harbor Island Drive (Entry Segment), through improvements such as high-visibility crosswalks, controlled crossings, and curb extensions or safety islands to reduce crossing distances;
 - Pedestrian and landscape improvements along both the west and east sides of Harbor Island Drive, including street furniture, seating, pedestrian lighting, a parkway with a minimum of 8 feet in width with landscaping and street trees, a multi-use path measuring a minimum width of 12 feet along the west side of the street, and a sidewalk measuring 8 feet in width along the east side of the street;
 - Safety islands integrated into the design of street crossings to shorten pedestrian crossing distances where needed; and

Where they exist, medians improved in coordination with the design of the above improvements, which may include a combination of signage, lighting, landscaping, and/or public art.

- Develop a water-based transfer point on the northeast side of the West Basin of Harbor Island.
- Develop up to four short-term public docking slips in association with recreational marina-related facilities in the West Basin of Harbor Island.
- Develop up to 165 additional recreational boat berthing vessel slips in association with existing recreational marina-related facilities in this subdistrict to allow for the accommodation of various-sized vessels.
- Develop up to 25,000 additional square feet of retail and/or retail with restaurant space in the Commercial Recreation-designated area along Harbor Island Drive (Entry Segment and Island Segments), which could be substituted for development of up to 25,000 square feet of restaurant space as indicated in the *Planned Improvements* section above.
- In addition to existing facilities, develop up to 1,700 additional hotel rooms, with up to 32,000 additional square feet of associated retail and restaurant, and/or up to 37,000 additional square feet of meeting space along Harbor Island Drive (Island Segment), for a total of 2,985 hotel rooms plus ancillary facilities in the West Harbor Island Subdistrict.

Development Standards

Proposed public realm standards include the provision of a continuous waterside promenade and walkways to enhance physical access to the waterfront. Proposed waterside promenades would be required as part of all development that abuts the waterfront and that is not a coastal-dependent use, and in any other location where a waterside promenade is generally depicted on Figure PD2.4 of the proposed PMPU. Proposed waterside promenades would have a minimum width of 15 feet in

the West Harbor Island Subdistrict, as generally depicted on Figure PD2.7 of the PMPU, and aligned with the guidance in PD2.7. Walkways would be provided to offer physical access perpendicular to the waterfront, in accordance with the requirements of Chapter 4 of the PMPU.

Scenic vista areas are proposed to be preserved in accordance with the requirements of Chapter 4 of the PMPU, in the following locations, as generally depicted on Figure PD2.4 of the proposed PMPU:

- Bayside of Harbor Island Drive near the west point of Harbor Island.
- Harbor Island Park on the bayside of Harbor Island Drive.
- Bayside of Harbor Island Drive (Island Segment) near the intersection of the Entry and Island Segments of Harbor Island Drive.

Building standards propose that structures must not exceed 160 feet in height. A 10- to 15-foot-wide building setback would be provided, as generally depicted on Figure PD2.7 of the proposed PMPU, between all waterside promenades and all landside development. The setback area is proposed to include landscaping and bicycle and pedestrian facilities, such as bike racks, fixed or movable seating, and/or other possible improvements.

Proposed buildings located on Tidelands at the intersection of Harbor Drive and Harbor Island Drive would be oriented to the corner to create a welcoming entry. Roof forms and other architectural features, such as doors, windows, and canopies, are proposed to be oriented toward the corner and Harbor Island Drive. Open space, patios, plazas, and/or landscaping may be located at this intersection; however, they are proposed to be accessible and scaled for pedestrian use. Allowable surface parking or structured parking would not be allowed to front this intersection and would not be oriented toward Harbor Island Drive. Parking would be located internal to the block, or oriented toward Harbor Drive. Proposed buildings located on Tidelands along the Harbor Island Drive (Entry Segment) would be oriented to front the street and open onto Harbor Island Drive, to create a pedestrian-oriented “main street” environment.

The location and configuration of existing public parking areas may be modified if an equivalent amount of public parking is provided through a mobility hub, on-street parking, or a combination thereof, subject to the requirements of the Mobility Element.

When a proposed development site would be located between the waterfront (Bay or Basin) and Harbor Island Drive, parking would be located toward the most interior, roadside portion of the development site. Proposed parking may be located partially underground or in a structure but would not directly abut the water’s edge.

East Harbor Island Subdistrict

The East Harbor Island Subdistrict includes the water and land area south of the Harbor Island Drive entry segment, west of North Harbor Drive, and north of the U.S. Coast Guard facility (see Figure 3-3).

Vision

The proposed vision for the East Harbor Island Subdistrict is to create a regional destination that is welcoming to visitors with improved mobility, increased recreation, and enhanced coastal access. The intensity of commercial development in East Harbor Island is proposed to increase with new hotel rooms, retail and restaurant space, and attractions. Mobility improvements are proposed to

expand access to and through the area, with the integration of bayfront circulator routes connecting directly to the SDIA, the Convention Center, and dedicated bikeways. A new mobility hub, together with water-based transfer points, is proposed and could provide options for workers and visitors to transfer between modes of transportation and reduce reliance on single-occupancy vehicles. The vision includes coordination with agencies that have transportation authority on the location of an airport transit connection, along with supporting transit stations and infrastructure. The proposed reconfiguration of Harbor Island Drive would allow for safer cycling, while providing new areas for recreation open space.

Special Allowances

No special allowances are proposed for this subdistrict.

Planned Improvements

Landside proposed access planned improvements for East Harbor Island include the development of a Regional Mobility Hub near the northwestern portion of the East Basin of Harbor Island, and development and operation of a bayfront circulator, which would meet the criteria of a Regional Mobility Hub, in accordance with the proposed requirements of Chapter 4 of the proposed PMPU, and provide wayfinding and pathway connections to connect to the nearby water-based transfer points on the northwestern portion of the East Basin of Harbor Island.

A bayfront circulator, as generally depicted on Figure PD2.3 of the PMPU, is proposed to be developed to provide connections between the Shelter Island, Harbor Island, and Embarcadero Planning Districts. The proposed bayfront circulator may be phased so that it starts during the summer months and, if demand warrants, is then expanded during other times of the year. An entrance gateway may be developed on or adjacent to the entry segment of Harbor Island Drive. Proposed modifications to North Harbor Drive, in coordination with other agencies, would include developing a multi-use path along the south side of North Harbor Drive, as generally depicted on Figure PD2.4 of the proposed PMPU, adjacent to the dedicated transit lane, to ultimately connect to the Shelter Island and Embarcadero Planning Districts. Additional proposed appealable projects associated with modifications to North Harbor Drive are discussed in the *Appealable Projects* section below.

The east-west portion of Harbor Island Drive (Island Segment) is proposed to be modified and may include the following:

- Narrowing to two or three general travel lanes to accommodate vehicular traffic.
- Reconfiguring off-street public parking as diagonal parking to increase on street parking supply and avoid loss of existing public parking unless parking is provided in the Regional Mobility Hub as described in Planned Improvement PD2.26 in Section 5.2.3(C)-I of the proposed PMPU.
- Incorporating high-visibility crosswalks in alignment with walkways and at intersections, including controlled crossings and curb extensions to reduce crossing distances.

Upon reconfiguration of Harbor Island Drive, the proposed PMPU plans for the expansion and activation of Recreation Open Space as described in Planned Improvement PD2.33 in Section 5.2.3(C)-I of the proposed PMPU.

Additionally, Liberator Way is proposed to be modified and may include the following:

- Narrowing to two general travel lanes to accommodate vehicular traffic.

- On-street parking.
- Crosswalks at Liberator Way and Harbor Island Drive.
- Pedestrian and landscape improvements along both sides of Liberator Way, as generally depicted on Figure PD2.8 of the proposed PMPU, including landscape improvements, street furniture, seating, and pedestrian lighting.
- Sidewalks with a minimum width of 8 feet along each side of the street.
- A minimum 9-foot-wide parkway located between the street (roadway) and the sidewalk, with enhanced native and drought tolerant landscaping and street trees.

Upon reconfiguration of Harbor Island Drive the proposed Recreation Open Space would be expanded and activated. Recreation Open Space improvements are proposed to provide an expanded waterside promenade, a series of garden spaces, an amenity zone landside of the waterside promenade, and up to five proposed activating features within the Recreation Open Space area, three of which may be pavilions, in accordance with the requirements of Chapter 4 of the proposed PMPU.

Upon reconfiguration of Liberator Way, Recreation Open Space would be created in the Recreation Open Space-designated area north of the basin. Recreation Open Space improvements are proposed to provide a waterside promenade, a step-down area, a potential hand-launched, non-motorized watercraft launch area, a potential water-based transfer point, a potential skate park; and other potential health and wellness features.

Proposed coastal access improvements would include developing water-based transfer points on the northwest side of the East Basin of Harbor Island, and the northeast side of the East Basin of Harbor Island. This proposed water-based transfer point would also be developed to allow for small recreational watercraft, such as dinghies. Existing short-term public docking in the East Basin of Harbor Island is proposed to remain, and one short-term public docking slip in the northwest side of the East Basin of Harbor Island would be developed.

Existing recreational marina-related facilities in the East Basin of Harbor Island are proposed to be modified, or replaced in-kind, provided there is no unmitigated increase in shading or fill. A launch area for hand-launched nonmotorized watercraft is proposed on the northeast side of the East Basin, as generally depicted on Figure PD2.3 of the proposed PMPU. Existing moorings in the Harbor Island Anchorage (A-9) could be modified or replaced in-kind. Upon reconfiguration of Harbor Island Drive, proposed step-down areas would be provided to offer direct, physical access to the water, and enable the public to touch the water at the west end of the basin and the northeastern edge of the basin, in the vicinity of the Scenic Vista Area in the proposed Recreation Open Space. Where provided, step-down areas would be integrated into the design of adjacent Recreation Open Space areas.

The PMPU also allows for modification or replacement in-kind of existing retail and/or restaurant, to the same or lesser size, and in the same general footprint in the Commercial Recreation-designated area along Harbor Island Drive, south of the basin.

Finally, in the Commercial Recreation-designated area north of the basin, development of up to 92,500 square feet of restaurant space is proposed, which could be substituted for development of up to 92,500 square feet of retail and/or retail with restaurant space as indicated in the *Appealable Projects* section below. Also in this Commercial Recreation-designated area north of the basin,

a visitor-serving attraction with up to 70,000 square feet of associated retail and/or retail with restaurant is proposed.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable projects for the East Harbor Island subdistrict:

- Modify North Harbor Drive, in coordination with other agencies, by narrowing North Harbor Drive to four general travel lanes to accommodate vehicular traffic and providing a dedicated transit lane along the south side of North Harbor Drive, east of Harbor Island Drive, to support a bayfront circulator or other transit options. The dedicated transit lane is planned to ultimately provide a connection between the SDIA and the San Diego Convention Center.
- Modify Harbor Island Drive (Entry Segment) to accommodate vehicular traffic, pathways, bikeways, and other improvements, including:
 - New signage welcoming visitors to San Diego and Harbor Island;
 - An arrival gateway at the intersection of Harbor Drive and Harbor Island Drive;
 - Pedestrian connections between North Harbor Drive and Harbor Island Drive (Entry Segment), through improvements such as high-visibility crosswalks, controlled crossings, and curb extensions or safety islands to reduce crossing distances;
 - Pedestrian and landscape improvements along both the west and east sides of Harbor Island Drive, including street furniture, seating, pedestrian lighting, a parkway with landscaping and street trees, a multi-use path along the west side of the street, and a sidewalk along the east side of the street; and
 - Where they exist, medians improved in coordination with the design of the above improvements, which may include a combination of signage, lighting, landscaping, and/or public art.
- Develop up to 60 additional recreational boat berthing vessel slips in association with existing recreational marina-related facilities.
- Allow for an increase of up to five moored vessels at the existing Harbor Island Anchorage.
- In the proposed Commercial Recreation–designated area north of the East Basin, develop retail, restaurant, and/or overnight accommodations, including:
 - Up to 1,360 hotel rooms with up to 40,000 square feet of meeting space; and/or
 - 92,500 square feet of associated retail and/or retail with restaurant (which could be substituted for development of up to 92,500 square feet of restaurant space as indicated in the *Planned Improvements* section above).
- Develop up to 400 beds or camping/recreational vehicle sites, or equivalent rooms, of lower cost overnight accommodations in the Commercial Recreation-designated area north of the East Basin.

- Develop up to 500 hotel rooms (as approved under the previously certified Port Master Plan in 1991) along Harbor Island Drive near the intersection of the Entry Segment and the Island Segment. This development may also include associated visitor-serving retail, restaurant, and/or meeting space, including piers, and ancillary uses.

Development Standards

Proposed public realm standards include the provision of a continuous waterside promenade and walkways for physical access to the waterfront. Scenic vistas are proposed for the following:

- View of the Bay from the northeast side of the East Basin of Harbor Island.
- View of the Bay from the eastern point of Harbor Island.

Building standards propose that structures must not exceed 225 feet in height (subject to FAA determination); building setbacks of 26 feet from Liberator Way, 20 feet from the North Harbor Drive right-of-way, and 10 to 15 feet in all other areas of the subdistrict; and upper story stepbacks of 26 to 51 feet from Liberator Way, 20 to 45 feet from North Harbor Drive, and 25 feet adjacent to walkways. Location and configuration standards are also proposed for parking.

Spanish Landing Subdistrict

The Spanish Landing Subdistrict (Spanish Landing) includes a linear park formed by Spanish Landing Park West, Spanish Landing Park East, and Cancer Survivor Park, located along Harbor Drive adjacent to West Harbor Island (see Figure 3-3).

Vision

The proposed vision for the Spanish Landing Subdistrict is to preserve Spanish Landing's recreation and pedestrian-focused character while enhancing bicycle and transit access and expanding commercial amenities. The intensity of commercial development is proposed to increase in Spanish Landing, with the addition of new retail and restaurant space. Future waterside development will promote public access throughout the area and activate the shoreline with a continuous waterfront promenade.

Special Allowances

There are no special allowances for this subdistrict.

Planned Improvements

Proposed landside access planned improvements for Spanish Landing include the development of the bayfront circulator, modification of North Harbor Drive, and development of a multi-use path along the south side of Harbor Island Drive. Specifically, the bayfront circulator, as generally depicted on Figure PD2.3 of the proposed PMPU, would provide connections between the Shelter Island, Harbor Island, and Embarcadero Planning Districts. The bayfront circulator may be phased so that it starts during the summer months and, if demand warrants, be expanded during other times of the year.

Proposed modifications to North Harbor Drive, in coordination with other agencies, would include a multi-use path along the south side of North Harbor Drive as generally depicted on Figure PD2.4 of the proposed PMPU, adjacent to a dedicated transit lane, to ultimately connect the Shelter Island,

Harbor Island, and Embarcadero Planning Districts. A proposed multi-use path would be developed to connect Spanish Landing Park to Shelter Island in coordination with the adjacent jurisdictions and appropriate agencies.

Proposed coastal access improvements would involve development of a water-based transfer point at the northwest side of the West Basin and maintenance of an existing launch area for hand-launched nonmotorized watercraft.

Development of up to 90,000 additional square feet of restaurant space in the Commercial Recreation-designated area along Spanish Landing is proposed, which could be substituted for development of up to 90,000 square feet of retail and/or retail with restaurant space as indicated in the *Appealable Projects* section below.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU identifies the following proposed appealable projects for the Spanish Landing subdistrict:

- Modify North Harbor Drive, in coordination with other agencies, by narrowing the roadway to four general travel lanes to accommodate all modes of travel.
- Develop up to 90,000 square feet of Retail and/or Retail with Restaurant space in the Commercial Recreation-designated area along Spanish Landing, which could be substituted for development of up to 90,000 square feet of restaurant space as indicated in the *Planned Improvements* section above.

Development Standards

Proposed public realm standards include the provision of a continuous waterside promenade and walkways to enhance physical access to the waterfront in accordance with the proposed requirements of Chapter 4 and Figure PD2.11 of the proposed PMPU. Moreover, proposed waterside promenades would be required as part of all development that abuts the waterfront and that is not a coastal-dependent use, and in any other location where a waterside promenade is generally depicted on Figure PD2.4 of the proposed PMPU. Proposed waterside promenades would have a minimum width of 15 feet in the Spanish Landing Subdistrict. Walkways would offer physical access perpendicular to the waterfront, in accordance with the proposed requirements of Chapter 4 of the proposed PMPU.

Scenic vistas are proposed for the following:

- View of the Bay from the western edge of Spanish Landing Park.
- View of the West Basin of Harbor Island and Bay from the middle of Spanish Landing Park.
- View of the West Basin of Harbor Island from the eastern edge of the Spanish Landing Subdistrict.

Proposed building standards include height limits, building setback requirements, and parking requirements. Specifically, structure heights are proposed to be limited to 30 feet, and buildings are proposed to provide a 10-foot-wide development setback between all waterside promenades and all landside development (as generally depicted on Figure PD2.11 of the proposed PMPU), and which

would include landscaping, public access, and waterfront activation, as well as bicycle and pedestrian facilities, such as bike racks and fixed or movable seating. Parking would not be allowed within the development setback. The PMPU also proposes that modifications may be made to the location and configuration of existing public parking areas if an equivalent amount of public parking is maintained in this subdistrict.

Pacific Highway Corridor Subdistrict

The Pacific Highway Corridor Subdistrict consists of a narrow strip of land adjacent to and including a segment of Pacific Highway and Laurel Street to the south and southeast of SDIA (see Figure 3-3).

Vision

The proposed vision for the Pacific Highway Corridor Subdistrict is to improve multi-modal access in the Pacific Highway Corridor while providing opportunities for limited commercial development and lower cost overnight accommodations. The District envisions the existing roadway, administrative, and parking uses will be preserved throughout the area, while also providing limited commercial development and lower cost opportunities for visitors to stay on Tidelands. Planned improvements proposed for this subdistrict include enhanced mobility connections that offer enhanced access for vehicular traffic, pedestrians, and bicyclists, as well as supporting regional mobility. The vision includes coordination with agencies that have transportation authority on the location of an airport transit connection, along with supporting mobility hubs, transit stations, and infrastructure.

Special Allowances

There are no special allowances proposed for this subdistrict.

Planned Improvements

All planned improvements for this subdistrict are appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable projects for the Pacific Highway Corridor Subdistrict:

- Modification of Pacific Highway to accommodate vehicular traffic as well as pathways and bikeways.
- Development of up to 1,000 beds (or equivalent in rooms) of lower cost overnight accommodations in the Commercial Recreation-designated area along Pacific Highway, which may also include visitor-serving retail, restaurant, and/or meeting space.

Development Standards

Building standards for the Pacific Highway Corridor Subdistrict propose that structures must not exceed 130 feet in height.

3.5.3.3 Planning District 3: Embarcadero

Located along the waterfront adjacent to Downtown San Diego, the Embarcadero Planning District (PD3) comprises a total of 456.98 acres with 206.5 acres of water area and 250.46 acres of land

area. PD3 is divided into three subdistricts: North Embarcadero, Central Embarcadero, and South Embarcadero. PD3 is a vibrant area, with broad regional recreation opportunities, bayfront coastal access, tourism, and economic value. This waterfront area combines visitor-serving uses with waterside maritime activities that showcase and celebrate the history of San Diego's waterfront, including commercial fishing, maritime museums, military history, recreational boating, and recreation areas, all of which contribute to the area's dynamic urban setting and enliven the waterfront user experience.

Proposed Water and Land Use Designations

Proposed water and land use designations for PD3, as well as the proposed acreages of each, are provided in Table 3-7. As shown, proposed water use designations would include Anchorage, Commercial Fishing Berthing, Industrial and Deep-Water Berthing, Navigation Corridor, Open Bay/Water, Recreational Berthing, and Sportfishing Berthing. Land use designations would include Commercial Fishing, Commercial Recreation, Institutional/Roadway, Maritime Services and Industrial, Recreation Open Space, and Visitor-Serving Marine Terminal. The proposed water and land use map for PD3 is provided on Figure 3-4.

Table 3-7. Embarcadero Planning District Water and Land Use Designations

Certified PMP Designations (Existing)	Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Water Use				
Commercial Fishing Berthing	18.77	Commercial Fishing Berthing	18.71	-0.06
Recreational Boat Berthing	28.88	Recreational Berthing	76.52	+47.64 ¹
Specialized Berthing	37.54	<i>(Designation removed in the PMPU and acreage redistributed to other designations)</i>	--	--
Terminal Berthing	18.05	Industrial and Deep-Water Berthing	36.04	+17.99 ²
Open Bay/Water	1.53	Open Bay/Water	3.27	+1.74 ³
Boat Navigation Corridor	31.82	<i>(Consolidated to Navigation Corridor)</i>	--	--
Ship Navigation Corridor	13.38	<i>(Consolidated to Navigation Corridor)</i>	--	--
<i>Total Consolidated Navigation Corridor</i>	45.20	Navigation Corridor	44.30	-0.90
Boat Anchorage	24.46	<i>(Consolidated to Anchorage)</i>	--	--
Ship Anchorage	27.62	<i>(Consolidated to Anchorage)</i>	--	--
<i>Total Consolidated Anchorage</i>	52.08	Anchorage	47.73	-4.35 ^{4,5}
	--	Conservation/Intertidal	2.51	+2.51 ³
Total Water Use	202.05	Total Water Use	229.07	+27.02
Land Use				
Commercial Fishing	3.99	Commercial Fishing	4.76	+0.77
Commercial Recreation	116.76	Commercial Recreation	102.67	-14.09 ⁶

Certified PMP Designations (Existing)	Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Aviation Related Industrial	22.44	Maritime Services and Industrial	24.43	+1.99
Marine Terminal	6.28	Visitor-Serving Marine Terminal	12.11	+5.83 ⁷
Open Space	1.10	<i>(Consolidated to Recreation Open Space)</i>	--	--
Park/Plaza	50.97	<i>(Consolidated to Recreation Open Space)</i>	--	--
<i>Total Consolidated Recreation Open Space</i>	52.07	Recreation Open Space	56.82 ⁸	+4.75 ⁹
Streets	50.54	Institutional/Roadway	48.17	-2.37 ¹⁰
Total Land Use	252.08	Total Land Use	248.97	-3.11

¹ Additional acreage from redistribution of Ship Navigation Corridor, Specialized Berthing, and Ship Anchorage.

² Additional acreage from redistribution of Terminal Berthing and Specialized Berthing.

³ Additional acreage from redistribution of Specialized Berthing.

⁴ Reduced acreage from redistribution to Recreational Berthing.

⁵ Certain water parcels had previously been assigned designations in the Certified PMP for informational purposes but were not a part of the District's coastal permitting authority. Pursuant to SB 507, those parcels have since been granted to the District from the California State Lands Commission. Thus, for consistency, parcels that had previously been assigned designations in the Certified PMP and have been granted to the District pursuant to SB 507 are proposed to be incorporated into the proposed PMPU area and within the District's coastal permitting authority. In PD3, this includes an additional Anchorage parcel in North Embarcadero.⁶ Reduced acreage from redistribution to Recreation Open Space and Visitor-Serving Marine Terminal

⁷ Additional acreage from redistribution of Commercial Recreation, Park/Plaza, and Marine Terminal

⁸ Does not include 6.3 acres of above-grade Recreation Open Space

⁹ Additional acreage from redistribution of Commercial Recreation and addition of Navy Pier

¹⁰ Reduced acreage from removal of areas designated as Streets that are not within PMPU area

North Embarcadero Subdistrict

The North Embarcadero Subdistrict generally encompasses the water and land area bounded by Laurel Street on the north, F Street on the south, Pacific Highway on the east, and the pierheads on the west—with the exclusion of the San Diego County Administration property and a block bounded by Broadway on the north, North Harbor Drive on the west, Pacific Highway on the east, and West Harbor Drive on the south, which belongs to the Navy (see Figure 3-4).

Vision

The vision for this subdistrict is that of a premier visitor destination on Tidelands, with recreational and commercial activating uses that encourage interaction with the waterfront. In addition to new attractions and enhancements to existing water-based museum attractions in the area, the intensity of commercial development is expected to increase to accommodate new hotel rooms and retail and restaurant space. Future waterside development will contribute to a continuous waterside promenade to promote public access throughout the area. In addition to new development, enhancements to existing uses and activation of new uses should increase coastal access opportunities. New and enhanced recreational space, including the completion of the Lane Field Setback Park, is a primary component of this area's vision, where proposed reconfiguration of roadways and reallocation of parking areas will expand open space to add both passive and active amenities that enhance the visitor experience. Finally, the numerous piers in this subdistrict are a focal point for this area, and the District envisions a subdistrict in which these piers will provide

expansive views of the Bay and unique waterfront recreational space with activating features, continue to serve as a welcoming entry point for cruise passengers, and provide additional commercial fishing space.

Special Allowances

The PMPU proposes three special allowances for the North Embarcadero Subdistrict: B Street Cruise Operations Staging, Broadway Pier, and Navy Pier.

B Street Cruise Operations Staging

This special allowance proposes the temporary closure of the completed B Street connection, between Pacific Highway and North Harbor Drive, which may occur when needed for truck and other staging uses associated with cruise operations.

Broadway Pier

This special allowance proposes the following requirements for the use of Broadway Pier:

- Wayfinding signage shall be provided to communicate that public access is permitted on the pier during days with no cruise ship calls.
- During cruise ship calls at Broadway Pier, Broadway Plaza (the area landward of the Broadway Pier) shall facilitate vehicle access to Broadway Pier for cruise operations and allow public access along the promenade consistent with security regulations.
- Up to 12 public meetings and 40 nonprofit events per year may occur, as long as they do not disrupt maritime operations.

Navy Pier

The final special allowance proposes to designate the entire Navy Pier as Recreation Open Space on the Embarcadero Planning District Water and Land Use Map with the phasing of development of parking and a park on the pier.

Planned Improvements

Proposed planned improvements for the North Embarcadero Subdistrict would involve improvements to landside circulation. Specifically, the proposed PMPU plans for a Regional Mobility Hub to be developed on the block bounded by Grape Street, North Harbor Drive, Hawthorne Street, and Pacific Highway (as depicted on Figure PD3.3 of the proposed PMPU), and a Local Gateway Mobility Hub be developed between Ash and B Streets (as depicted on Figure PD3.3 of the proposed PMPU). The Regional Mobility Hub would be accessible from Hawthorne Avenue and Pacific Highway. In accordance with Chapter 4 of the proposed PMPU for Regional Mobility Hubs, the mobility hub would provide wayfinding and pathway connections to connect to the potential water-based transfer point and short-term public docking at the Window to the Bay Pier. The Mobility Hub would also accommodate existing parking—if the mobility hub is located on a parcel(s) with existing public and/or private parking—and would include a mix of commercial uses that are integrated to help visually screen structured parking, including the development of up to 25,000 additional square feet of restaurant space (which could be substituted for development of up to 25,000 square feet of retail and/or retail with restaurant as indicated in the *Appealable Projects* section below).

The proposed Local Gateway Mobility Hub would meet the criteria of a Local Gateway Mobility Hub, or larger, in accordance with Chapter 4 of the proposed PMPU; provide wayfinding and pathway connections to connect to the existing water-based transfer point and short-term public docking at the restaurant at the foot of Ash Street; and serve as the potential water-based transfer point at Navy Pier.

The proposed PMPU plans for the development and operation a bayfront circulator to provide connections between the Shelter Island, Harbor Island, and Embarcadero Planning Districts. The District may expand the summer shuttle service that operates along Harbor Drive to establish year-round connections as a form of the bayfront circulator.

The proposed PMPU plans for the reconfiguration of North Harbor Drive to more efficiently accommodate vehicular traffic while allowing intermittent curbside management areas (i.e., dedicated short-term parking and longer term Americans with Disabilities Act [ADA] accessible parking; passenger, taxi, and ride-share loading areas; and tenant servicing on the west side of North Harbor Drive); providing a multi-use path along the west side of the street as part of the Recreation Open Space; and, upon reconfiguration, expanding and activating Recreation Open Space on the bayside of North Harbor Drive, as described in PD3.10 of the proposed PMPU.

To accomplish the proposed reconfiguration of North Harbor Drive, existing on-street parking would first be consolidated into mobility hubs, as described in PD3.4 and PD3.5 of the proposed PMPU (see PD3.8 of the PMPU).

Upon the proposed reconfiguration of Harbor Drive, as described in Planned Improvement PD3.8 in Section 5.3.2(C)-I of the proposed PMPU, Recreation Open Space would be expanded and activated, as generally depicted on Figure PD3.5 of the proposed PMPU, by creating Recreation Open Space along the west side of North Harbor Drive, including a series of garden spaces that are linked through pathways, with the intent of creating a cohesive waterfront experience that also protects maritime operations. A multi-use path is proposed along the landside of the Recreation Open Space with a minimum of 40 percent of the surface area as soft surfaces to provide users with visual and physical relief from paved surfaces (soft surfaces may include planting ground cover and other materials, such as mulch and turf). Moreover, Recreation Open Space between Grape Street and Ash Street would be designed as a waterfront destination park with active uses.

Up to 16 activating features are proposed to be added, 9 of which may be pavilions, in Recreation Open Space areas and along the waterside promenade in accordance with the requirements of Chapter 4 of the proposed PMPU. The activating features would be dispersed throughout the Recreation Open Space, while pavilions may be sited as single buildings or in pairs. As new proposed Recreation Open Space areas are developed, consideration would be given for service loading for all existing and future Tideland amenities and tenants.

Proposed coastal access improvements would involve modification, replacement, or development of new water-based transfer points, as depicted on Figure PD3.3 in the proposed PMPU (Appendix J); development of a new 12,000-square-foot transient dock with up to 20 vessel slips associated with the 30,000-square-foot public pier referred to as the Window to the Bay Pier (located just south of the Grape Street Pier); installation of a new launch area for hand-launched, non-motorized watercraft at the northwestern corner of the subdistrict; and the provision of step-down areas to provide direct access to the water at the Window to the Bay Pier and in Recreation Open Space areas in the waterfront destination park on the west side of North Harbor Drive.

The PMPU would allow modification to, or replacement in-kind of, cruise ship terminal facilities, as well as up to 25,000 additional square feet of restaurant space and the modification or expansion of existing water-based museum attractions to allow up to 20,000 square feet of additional museum space, with associated retail and/or retail with restaurant space constructed over two stories on an overwater platform of up to 15,000 square feet that includes coastal access features, and up to 110,000 square feet of berthing area for historic vessels and barges, along with a water-based transfer point. Other visitor-serving commercial uses include allowance of modifications to, or replacement in-kind of, existing retail and/or restaurant, and existing hotel rooms, including associated retail or restaurant space, in the same general footprint in the Commercial Recreation-designated area between Ash Street and Broadway.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable projects for the North Embarcadero Subdistrict:

- Reconnect roadways in the area bounded by Ash Street, B Street, Pacific Highway, and North Harbor Drive, including portions of the block south of B Street, as follows:
 - Extend A Street to North Harbor Drive to provide a link between North Harbor Drive and Pacific Highway for pedestrian, bicycle, and vehicle use.
 - Reconnect B Street between Pacific Highway and North Harbor Drive for pedestrian, bicycle, and vehicle use, in addition to temporary truck and other staging associated with cruise ship operations.
- Reconfigure North Harbor Drive to more efficiently accommodate all modes of travel while allowing for the following:
 - Four general travel lanes, north of Grape Street.
 - Two general travel lanes, one in each direction, between Grape Street and F Street.
 - Bayfront circulator stops, including a potential dedicated transit lane.
- Allow for modifications to the moorings at the Embarcadero Anchorage (A-3) to allow for an increase of up to 20 moored vessels.
- Develop retail, restaurant, and/or lower cost accommodations at the Regional Mobility Hub located on the Commercial Recreation-designated area located on the block bounded by Grape Street, North Harbor Drive, Hawthorn Street, and Pacific Highway, including up to 500 beds (or equivalent rooms) of lower cost overnight accommodations, and/or up to 25,000 additional square feet of Retail and/or Retail with Restaurant space (which could be substituted for development of up to 25,000 square feet of restaurant space as indicated in the *Planned Improvements* section above).
- In addition to existing facilities, develop up to 750 additional hotel rooms, with 30,000 additional square feet of associated Retail and Restaurant, and/or 30,000 additional square feet of Meeting Space, For a total of up to 2,350 hotel rooms plus ancillary facilities, in the Commercial Recreation-designated area between Ash Street and Broadway.

- Modify and/or expand the two northernmost existing Grape Street Piers, which are used for commercial fishing operations, by up to 0.2 net new acre and allow for the support of on- and off-loading needs, such as providing a truck loading area at the foot of the piers.

Development Standards

Proposed public realm standards include the provision of a continuous waterside promenade, new pedestrian linkages, walkways, and amenity zones to enhance physical access to the waterfront. The PMPU proposes specific standards for the location, width, and other requirements for these features. Specifically, waterside promenades would be required as part of all development that abuts the waterfront and that is not a coastal-dependent use, and in any other location where a waterside promenade is generally depicted on Figure PD3.4 of the proposed PMPU. The proposed waterside promenades would have a minimum width of 30 feet, as generally depicted on Figure PD3.6 of the PMPU, except where minimum width is not physically possible because of existing features, such as roadways or trees, in which case the waterside promenade would not be less than 16 feet wide in such areas. In addition, amenity zones would be located on the landside of the waterside promenade.

Moreover, the PMPU proposes that all development along North Harbor Drive must provide a sidewalk and parkway, as generally depicted on Figure PD3.7 of the proposed PMPU. Proposed sidewalks would be provided along both the east and west sides of North Harbor Drive, extend through the entire subdistrict, be continuous along the length of the street, and should be noncontiguous with the curb, incorporating a parkway between the sidewalk and roadway.

In the area bounded by Ash Street, B Street, Pacific Highway, and North Harbor Drive, including portions of the block south of B Street, as generally depicted on Figure 3.8 of the proposed PMPU, a midblock, north-south pedestrian link may be incorporated as an option. The east-west pedestrian linkages along Grape Street and Ash Street to connect the San Diego County Administration Building and the waterside promenade along North Harbor Drive are proposed to be maintained.

The PMPU proposes scenic vistas at the following locations:

- Area near Laurel Street and North Harbor Drive.
- The Crescent along North Harbor Drive.
- The Window to the Bay Pier (the Window to the Bay Pier must preserve physical access to the scenic views from public spaces along the North Embarcadero Subdistrict, between Date Street and Beech Street).
- The waterside promenade around the restaurant at the foot of Ash Street.
- The public viewing platform north of Broadway Pier.
- The west end of Broadway Pier.
- The west end of Navy Pier.
- The public viewing deck on the Midway Museum.

In addition, the PMPU proposes view corridor extensions at the following locations:

- Hawthorn Street
- Grape Street

- Ash Street
- A Street
- B Street
- C Street
- West Broadway
- E Street
- F Street

Proposed building standards include bulk and scale, such as height limits, building setbacks, upper story setbacks, tower separation and spacing, and building frontages and orientation.

Specifically, on the block bounded by Grape Street, North Harbor Drive, Hawthorn Street, and Pacific Highway, structures may not exceed 80 feet in height. Along Hawthorn Street and Grape Street, upper story setbacks would be provided, limiting the base building height to 30 feet, for a minimum depth of 15 feet.

In the area bounded by Ash Street, North Harbor Drive, B Street, and Pacific Highway, including portions of the block south of B Street, as generally depicted on Figure 3.8 of the proposed PMPU, the PMPU proposes that structures north of A Street, within the western portion of the block, adjacent to North Harbor Drive, may not exceed 120 feet in height; north of A Street, within the eastern portion of the block, adjacent to Pacific Highway, may not exceed 175 feet in height; in the area between A Street and B Street, within the western portion of the block, adjacent to North Harbor Drive, may not exceed 150 feet in height; and in the area between A Street and B Street, within the eastern portion of the block, adjacent to Pacific Highway, may not exceed 200 feet in height. Structures south of the B Street reconnection may not exceed 65 feet in height.

Proposed building frontages would be required to incorporate activating uses and features, such as these:

- Locating coastal-dependent primary uses and visitor-serving uses on the ground floor facing the promenade, recreation areas, Recreation Open Space areas, and streets.
- Prohibiting secondary uses on the ground floor for multi-story buildings.
- Providing direct access between development and the waterside promenade.
- Providing direct access between development and Recreation Open Space.
- Providing a high degree of building transparency along the promenade, recreation areas, Recreation Open Space areas, and ground floor building frontages.

North Embarcadero Subdistrict Options

In addition to the proposed PMPU, this Draft PEIR analyzes the potential environmental impacts associated with three options for future development along North Harbor Drive in the Embarcadero Planning District.

- Option 1: Waterfront Destination Park at Foot of Navy Pier.
- Option 2: 205-Foot Setback East of North Harbor Drive.
- Option 3: 205-Foot Setback West of North Harbor Drive.

Analyzing Option 1 is a requirement of the 2011 North Embarcadero Visionary Plan (NEVP) Phase 1 Coastal Development Permit (CDP). Options 2 and 3 are commitments of the 2010 Lane Field Project Memorandum of Understanding (MOU) with the District, Lane Field San Diego Developers, LLC, and the San Diego Navy Broadway Complex Coalition (Coalition) (“Lane Field MOU”).

The options prioritize pedestrians over vehicles. A description of each option is detailed further, below. In accordance with these legal commitments, each option is considered and analyzed in the individual resource sections of this Draft PEIR for the area, and not in Chapter 6, *Alternatives to the PMPU*. The options could primarily affect three land uses – Commercial Recreation, Institutional/Roadway, and Recreation Open Space, as shown in Table 3-8 below. The options would not include any changes to the water uses identified in the proposed PMPU within the North Embarcadero Subdistrict. These options are shown on Figures 3-5 through 3-7.

Table 3-8. Subdistrict Land Use Options

Option	Land Uses (acres)		
	Commercial Recreation	Institutional/Roadway	Recreation Open Space
Proposed PMPU	93.60	46.39	52.84
Option 1: Waterfront Destination Park at Foot of Navy Pier	102.43 (+1.49)	46.19 (-6.71)	64.53 (+3.98)
Option 2: 205-Foot Setback East of North Harbor Drive	98.32 (-3.34)	47.72 (-5.24)	67.83 (+7.35)
Option 3: 205-Foot Setback West of North Harbor Drive	100.09 (-0.84)	44.93 ¹ (-8.03)	68.57 ² (+8.08)

¹ Total does not include 2.01 acres of Institutional/Roadway outside of the District’s jurisdiction.

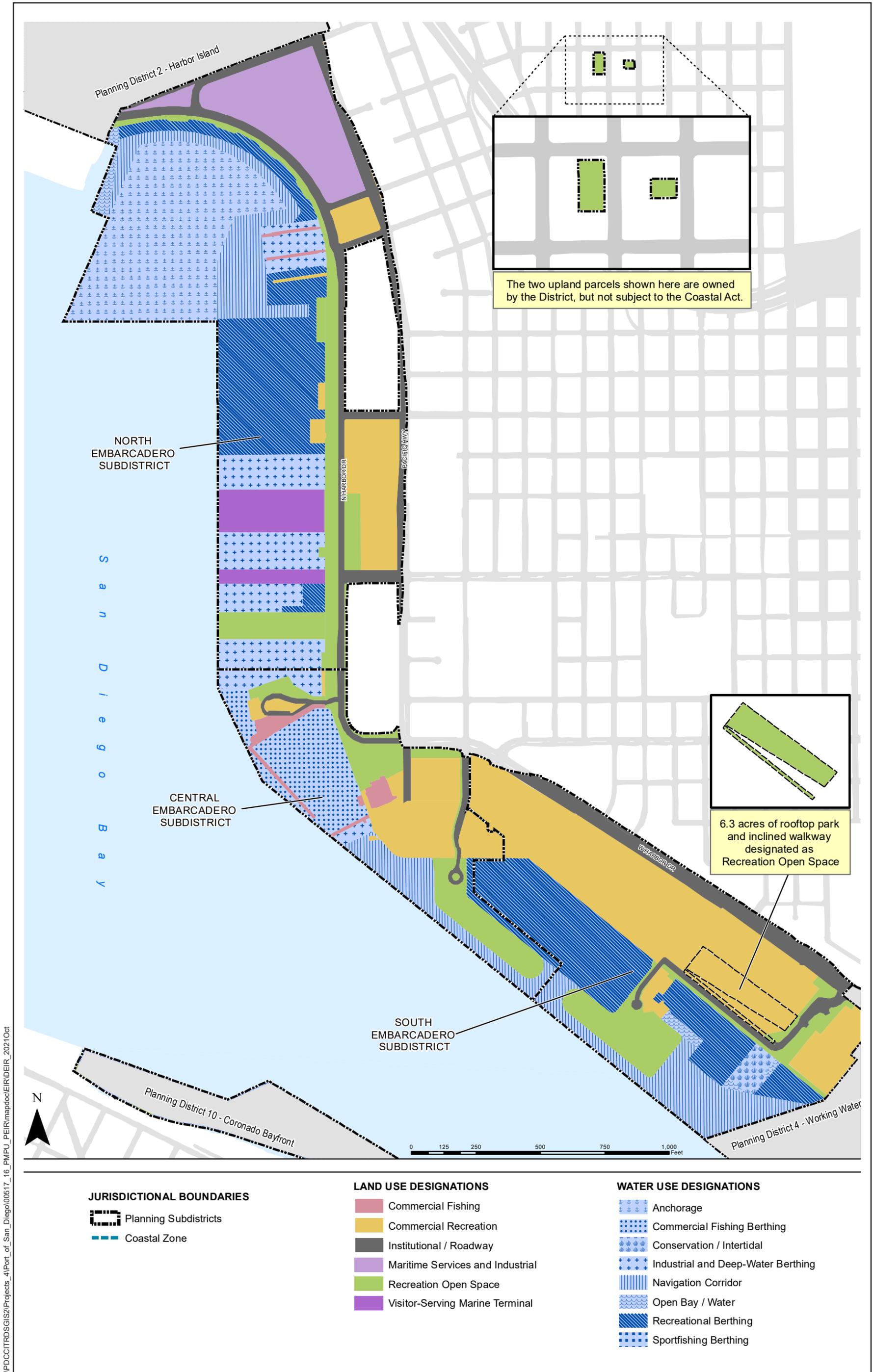
² Total does not include 1.92 acres of Recreation Open Space outside of the District’s jurisdiction.

Note: Numbers in parentheses represent delta between the proposed PMPU and the options.

Option 1: Waterfront Destination Park at Foot of Navy Pier

The NEVP Phase 1 CDP requires the District, as part of this PEIR, to identify and analyze certain project components that are not now found in the PMPU. The District is using this Draft PEIR and the proposed PMPU to satisfy the NEVP Phase 1 CDP requirements. First, the NEVP Phase 1 CDP requires the District to identify the location of the proposed “replacement” Waterfront Destination Park, which is the final component of the District’s replacement of the formerly proposed oval-shaped park/plaza at the foot of Broadway. The NEVP Phase 1 CDP requires that the Waterfront Destination Park encompass a minimum of 1.25 acres and provides that the public space, which was constructed at the foot of Broadway Pier (approximately 0.37 acre), as part of the NEVP Phase 1 project “may count towards the 1.25 acres required to be part of the Waterfront Destination Park.” Thus, the minimum required size of the replacement Waterfront Destination Park is 0.88 acre (1.25 acres minus 0.37 acre = 0.88 acre).

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JURISDICTIONAL BOUNDARIES

- Planning Subdistricts
- Coastal Zone

LAND USE DESIGNATIONS

- Commercial Fishing
- Commercial Recreation
- Institutional / Roadway
- Maritime Services and Industrial
- Recreation Open Space
- Visitor-Serving Marine Terminal

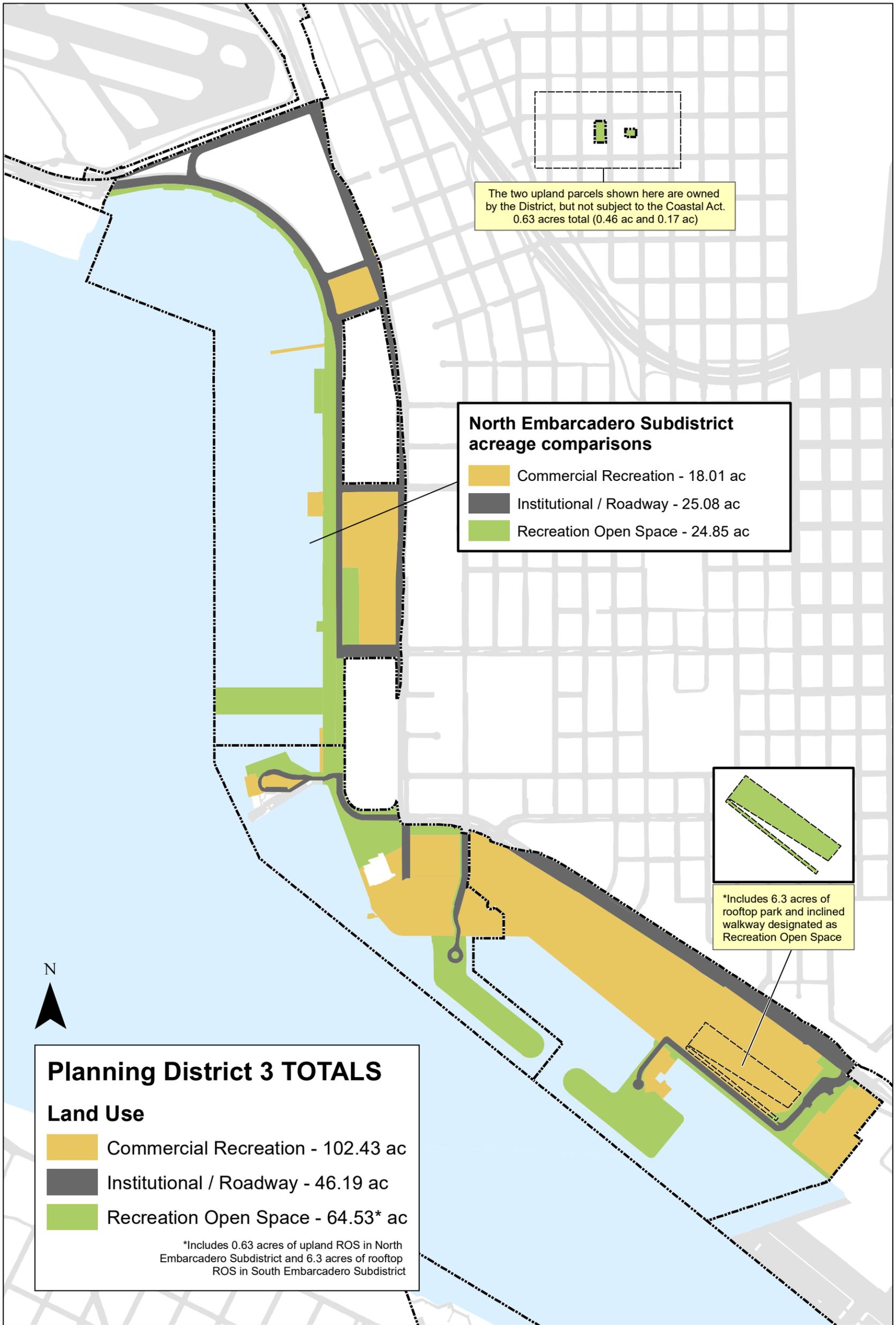
WATER USE DESIGNATIONS

- Anchorage
- Commercial Fishing Berthing
- Conservation / Intertidal
- Industrial and Deep-Water Berthing
- Navigation Corridor
- Open Bay / Water
- Recreational Berthing
- Sportfishing Berthing

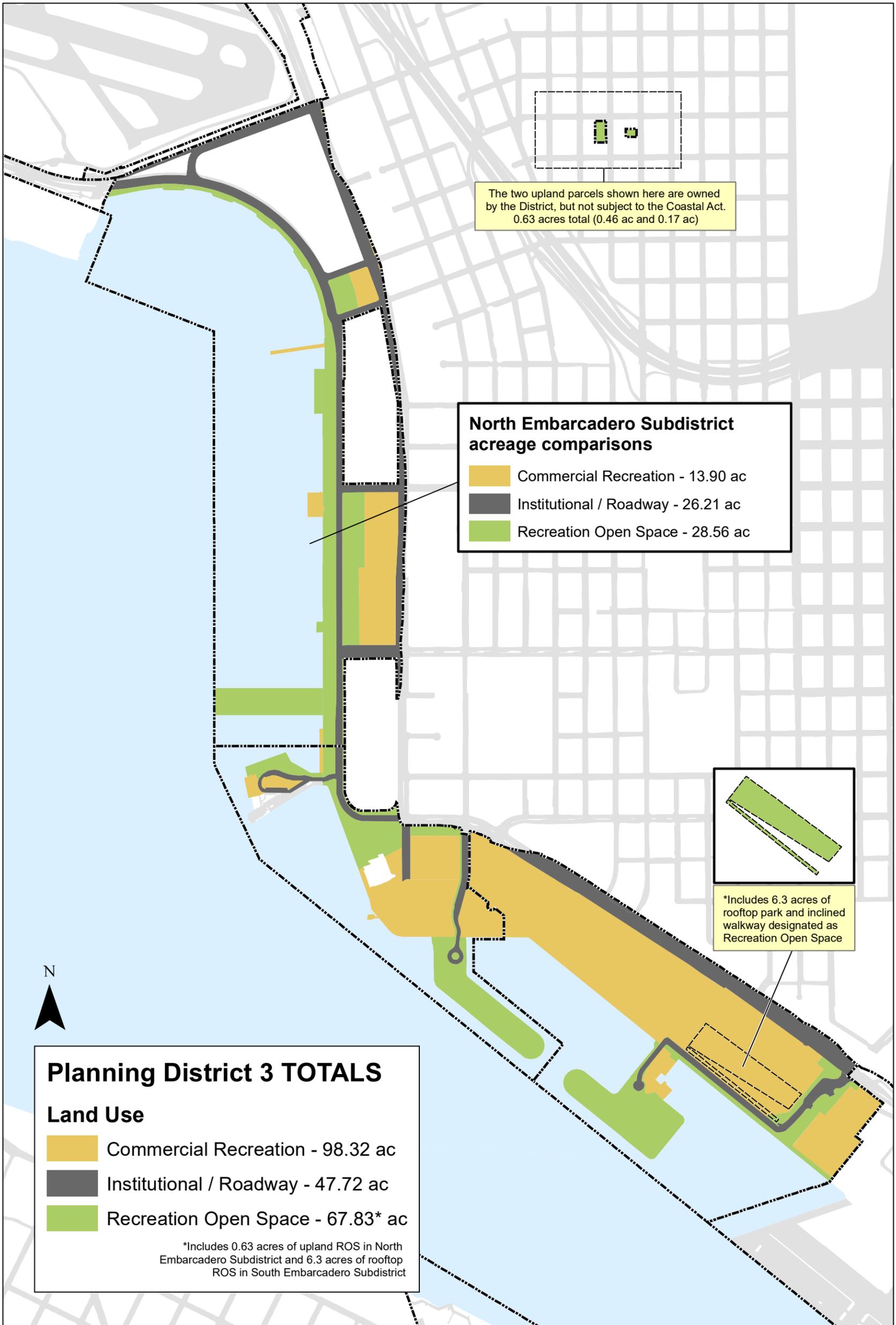


Figure 3-4
PD3: Embarcadero Water and Land Use Map
Port Master Plan Update

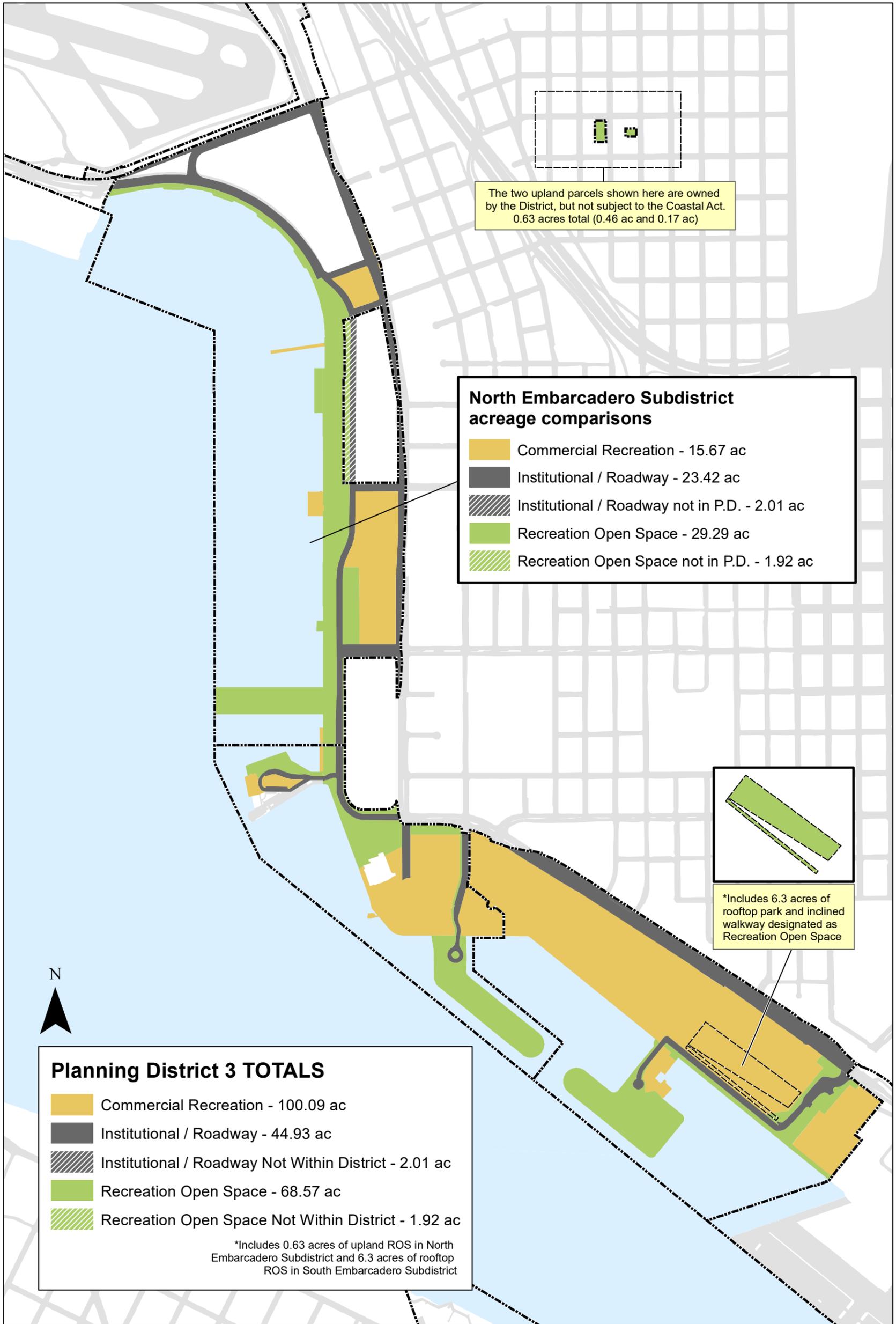
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The NEVP Phase 1 CDP also requires that this Draft PEIR and the proposed PMPU study at least two potential locations for the Waterfront Destination Park: (1) along the esplanade near Navy Pier, between the Navy Broadway Complex (also known as, the IQHQ Research and Development District (RaDD) site) and the waterfront, which must also examine the closure of North Harbor Drive to automobile circulation; and (2) along the esplanade across from or near the County Administration Center. The first potential location is the area being studied as Option 1. The second is included in the proposed PMPU as the preferred location for the Waterfront Destination Park, which is identified as PD3.10 in Chapter 5.3 of the PMPU. Per the proposed Planned Improvement PD3.10 (as described in Section 5.3.21-I of the PMPU), this second location is situated along the west side of North Harbor Drive between Grape Street and Ash Street.

In order to accommodate this park space in the Option 1 area, North Harbor Drive would be closed to vehicles (with the exception of emergency vehicles and shuttles) from the prolongation of West G Street to Broadway, to promote pedestrians, bicycles, and pedicab circulation. Park space in this Option 1 area would include a mix of hardscape and landscape, including lawn or turf space for passive recreation such as sitting and picnicking.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 involves establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. Option 2 would create additional Recreation Open Space east of North Harbor Drive, between West B Street and West Ash Street, as well as the parcel bounded by North Harbor Drive, West Hawthorne Street, West Grape Street, and Pacific Highway. The Lane Field Setback Park, which was constructed as part of the Lane Field Hotel Project, previously established a 150-foot setback east of North Harbor Drive between the prolongation of B Street to the north and Broadway to the south. The 1.66-acre existing Lane Field Setback Park can be expanded by another approximately 0.5 acre with the addition of land from the 1220 Pacific Highway site (currently leased to the U.S. Navy), for a contiguous 2.16-acre setback park. Under this Option 2, the setback park would be contiguously expanded north of the Lane Field Setback Park and would be an average 205-foot setback from north of the Lane Field Setback Park (which is the same as the prolongation of B Street) to Hawthorn Street.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 involves realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, and establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and to the immediate east of the promenade planned under NEVP Phase 1 adjacent to San Diego Bay. Implementation of Option 3 would require an addition of land from: 1220 Pacific Highway (currently leased by the U.S. Navy) and Wyndham San Diego Bayfront Hotel (which includes Ruth's Chris and Hazelwoods); the parcel bounded by North Harbor Drive, West Hawthorne, West Grape, and Pacific Highway; and a portion of the CAC parcel containing the park, between the present alignment of North Harbor Drive and the County Administration building.

Central Embarcadero Subdistrict

The Central Embarcadero Subdistrict includes the water and land area bounded roughly by F Street on the north, West Harbor Drive on the east, and the pierheads on the west. The southern portion of the subdistrict includes the continuation of Kettner Boulevard as well as Embarcadero Marina Park North, but does not include the adjacent marina (see Figure 3-4).

Vision

With the exception of the redevelopment of the existing restaurant of G Street Mole (currently, the Fish Market), and roadway improvements along Harbor Drive, the PMPU does not propose any new uses, development, or change in intensity of development in Central Embarcadero. Rather, the continuation of the existing uses, with potential maintenance of and minor improvements to existing development, such as Seaport Village and Tuna Harbor, could be allowed under the proposed PMPU.

Accordingly, the proposed vision in the PMPU reflects the existing state of the Central Embarcadero. The vision for this subdistrict is to continue it as a premier Tidelands destination that provides continuous coastal access and dining and shopping attractions while honoring the area's long-standing maritime and commercial fishing legacy. The Central Embarcadero will continue to provide a mix of recreational, commercial, and commercial fishing uses along the existing 6-mile-long waterside promenade, which will continue to provide continuous coastal access with connections north to Spanish Landing Park and south toward the Working Waterfront, and a waterside promenade loop around G Street Mole.

Existing waterfront open spaces, such as Tuna Harbor Park, Ruocco Park, and Embarcadero Marina Park North, provide recreational opportunities and expansive views of the water. The continuation of the commercial uses will serve as an anchor for the Embarcadero, providing dining and shopping attractions. Pedestrian linkages from the upland areas will continue to provide access to the waterfront, making this a lively activity center for residents and visitors alike. The existing commercial fishing uses at Tuna Harbor Basin, including the fish processing facility, the marina, and the piers, will honor the long-standing maritime and commercial fishing legacy of this area and allow opportunities for visitors to witness the commercial fishing activities firsthand. Commercial fishing uses will continue to use and maintain the existing fish unloading dock, with direct, unrestricted access to joint use of the pier/dockside facilities.

Special Allowances

There are no special allowances proposed for this subdistrict.

Planned Improvements

Proposed planned improvements related to landside access for this subdistrict involve reconfiguring North Harbor Drive/West Harbor Drive (see details in *Appealable Projects* below); adding a multi-use path north of Market Street, landscaping, and curbside management program (i.e., dedicated short-term parking and longer term ADA accessible parking; passenger, taxi, and ride-share loading areas; tenant/business servicing on the west side of Harbor Drive); and improving the efficiency and safety of the G Street/North Harbor Drive intersection. The PMPU also proposes that the existing waterside promenade on G Street Mole will remain.

Related to retail and restaurant space, the District may allow for the redevelopment of the existing restaurant on G Street Mole. In addition, the District would allow modification or replacement-in-

kind of existing commercial fishing facilities. The remainder of the Subdistrict, which is mostly made up of Seaport Village, would remain as existing conditions with the exception of maintenance, such as, without limitation, roof replacements, painting, resurfacing of façades, mechanical equipment upgrades, and tenant improvements to the existing structures, and the addition of activating uses like live music, outdoor dining, etc.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable project for the Central Embarcadero Subdistrict:

- Reconfigure the North Harbor Drive/West Harbor Drive right-of-way to accommodate all modes of travel while allowing for the following:
 - Two general travel lanes north of Market Street.
 - Four general travel lanes south of Market Street.
 - Bayfront circulator stops, including potential dedicated transit lanes.

Development Standards

Proposed public realm standards include the continued provision of a continuous waterside promenade.

The PMPU proposes to keep the existing scenic vistas at the following locations:

- Bayside of G Street Mole.
- View of Tuna Harbor.
- Along the waterfront south of Ruocco Park and north of Market Pier.

Redevelopment of the existing restaurant on G Street Mole shall be a maximum height of 45 feet.

South Embarcadero Subdistrict

The South Embarcadero Subdistrict includes the water and land area bounded roughly by Seaport Village and Embarcadero Marina Park North to the north/northwest, West Harbor Drive to the northeast, and the Tenth Avenue Marine Terminal to the south/southeast. The Embarcadero Marina Park South encompasses the southwestern area of the subdistrict (see Figure 3-4).

Vision

Similar to the Certified PMP, the PMPU's vision for this subdistrict is to provide an expansion of the San Diego Convention Center (SDCC) as previously approved by the Board of Port Commissioners and California Coastal Commission [CCC], a mix of convention center support services, coastal recreation areas, activating features, and programmed activities so that visitors have multiple opportunities to access and enjoy the area. The vision for this subdistrict is an easily accessible area that provides a mix of convention center uses and support services, coastal recreation areas, activating features, and programmed activities so that visitors have multiple opportunities to access and enjoy the area. The intensity of commercial development is expected to increase to

accommodate new hotel rooms and retail space, and recreational enhancements are planned to offer coastal access and enhance the visitor experience in the subdistrict's recreation open spaces. In addition, the performance venue in Embarcadero Marina Park South is a unique feature of this subdistrict, and low-cost visitor-serving opportunities will continue to be a part of the venue's programming to encourage visitors to stay and enjoy this area.

Special Allowances

Embarcadero Marina Park South Programming

The existing permanent performance venue located in Embarcadero Marina Park South, as a condition of the coastal development permit, will remain open to the public 85 percent of the year, except for the performance stage, back-of-house facilities, pavilions, and box office, which will be unavailable to the public at all times. No physical or visual barriers to public access will be present during the 85 percent of the year when the permanent venue is open to the public. As part of the annual operation of the permanent performance venue, low-cost visitor-serving opportunities will include some combination of reduced admission pricing, free rehearsals, community events, and public educational programming offered free of charge to the general public.

Planned Improvements

Proposed planned improvements related to landside access for this subdistrict involve modifications to or replacement of the existing Local Gateway Mobility Hub near the SDCC, and development and operation of a bayfront circulator. Proposed landside access planned improvements would also include modifications to roadways, such as closure of Market Street between West Harbor Drive and Columbia Street and reconfigurations to West Harbor Drive/East Harbor Drive to more efficiently accommodate a multi-use path connecting to Martin Luther King, Jr. Promenade. Within the proposed Recreation Open Space areas, planned improvements include the introduction of six activating features.

The PMPU would allow modification or replacement in-kind of existing water-based transfer points in the locations generally at the northwest end of the basin south of Embarcadero Marina Park South and at the northeast end of the basin south of Embarcadero Marina Park South. It would also allow for modifications to, or replacement in-kind of, existing recreational marina-related facilities

- Proposed coastal access planned improvements would involve development of a new water-based transfer point, at the South Embarcadero public access mole pier.

Related to convention center space, the SDCC may be expanded to provide a contiguous expansion, including up to 400,000 additional square feet of exhibit area, meeting rooms, and ballrooms; 560,000 additional square feet of support spaces; and approximately 15,000 additional square feet of visitor-serving uses (as approved under the previously certified Port Master Plan in 2013). The expanded SDCC would also include at least 11.1 acres of recreation open space, which would consist of approximately 4.80 acres at-grade and approximately 6.30 acres above-grade, the latter of which would include a 5-acre rooftop park and an approximately 1.3-acre inclined walkway from the ground level to the rooftop. The 5-acre rooftop park would include at least five scenic vista areas, all of which would face the Bay.

Visitor-serving commercial uses include allowance of modifications to, or replacement in-kind of, existing retail and/or restaurant, and existing hotel rooms, including associated retail, restaurant

and/or restaurant space, in the same general footprint in the Commercial Recreation-designated area in this subdistrict.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable projects for the South Embarcadero Subdistrict:

- Support Market Street closure between West Harbor Drive and Columbia Street, and provide a pedestrian scramble or roundabout at the West Harbor Drive/Market Street intersection, if determined feasible following coordination with the adjacent jurisdiction.
- Reconfigure West Harbor Drive/East Harbor Drive between the Harbor Drive/Market Street intersection and Park Boulevard to more efficiently accommodate all modes of travel while allowing for four general travel lanes between Market Street and Park Boulevard and a dedicated transit lane, including bayfront circulator stops.
- Develop a water-based transfer point at the northeast corner of the Marriott Marina, as generally depicted on Figure PD3.3 of the proposed PMPU.
- Develop up to two short-term public docking slips in association with recreational marina-related facilities, as generally depicted on Figure PD3.3 of the proposed PMPU.
- Develop new marina-related facilities with up to 30 recreational boat berthing vessel slips and associated recreational marina-related facilities, southeast of the South Embarcadero public access mole pier, to accommodate various-sized vessels.
- Develop up to 35 additional recreational boat berthing vessel slips in association with existing recreational marina-related facilities in the subdistrict, to accommodate various-sized vessels.
- Develop up to 600 hotel rooms (100 net new rooms above the number of rooms approved under the previously certified Port Master Plan in 2013), with 2,500 additional square feet of associated Retail and Restaurant, and/or 55,000 additional square feet of Meeting Space along Harbor Drive.

Development Standards

Proposed public realm standards include the provision of a continuous waterside promenade with stipulations for minimum widths and amenities. Specifically, the PMPU proposes that the waterside promenades would have a minimum width of 30 feet. If minimum width is not physically possible because of existing features, such as roadways, the promenade would be not less than 24 feet wide in such areas. Moreover, the proposed waterside promenade would incorporate a multi-use path, which should be located on the landside side of the promenade. Where provided, amenity zones would be located on the waterside of the waterside promenade.

The PMPU proposes scenic vistas at the following locations:

- View of the Marriott Marina from the waterside promenade, west of the Convention Center.
- View of the Bay from the fishing pier at Embarcadero Marina Park South.

- View of the Bay from the South Embarcadero public access mole pier.

In addition, the PMPU proposes preservation of the Park Boulevard View Corridor Extension. The PMPU does not propose any building standards for the South Embarcadero Subdistrict.

3.5.3.4 Planning District 4: Working Waterfront

Located south of downtown San Diego, the Working Waterfront Planning District (PD4) serves as a strategic regional, state, and federal port of entry supporting maritime trade operation and water-based commerce. PD4 comprises a total of 367.99 acres with 114.49 acres of water area and 253.50 acres of land area. PD4 includes three subdistricts: Tenth Avenue Marine Terminal, Cesar Chavez Park, and Harbor Drive Industrial. The planning district is a highly productive consolidation of marine terminal and maritime services and industrial land uses, facilitating maritime trade and providing large-scale coastal-dependent industrial activities with direct access to heavy rail service and deep-water berthing. This planning district includes water and land uses supporting a range of coastal-dependent maritime trade operations and water-based commerce with a competitive and sustainable freight movement system. It provides high-quality jobs in goods movement and in shipbuilding and ship repair for maritime and national defense interests.

Proposed Water and Land Use Designations

Proposed water and land use designations for PD4, as well as the proposed acreages of each, are provided in Table 3-9. Proposed water use designations would include Industrial and Deep-Water Berthing. Proposed land use designations would include institutional/Roadway, Marine Terminal, Maritime Services and Industrial, and Recreation Open Space. The proposed water and land use map for PD4 is provided on Figure 3-8.

Table 3-9. Working Waterfront Planning District Water and Land Use Designations

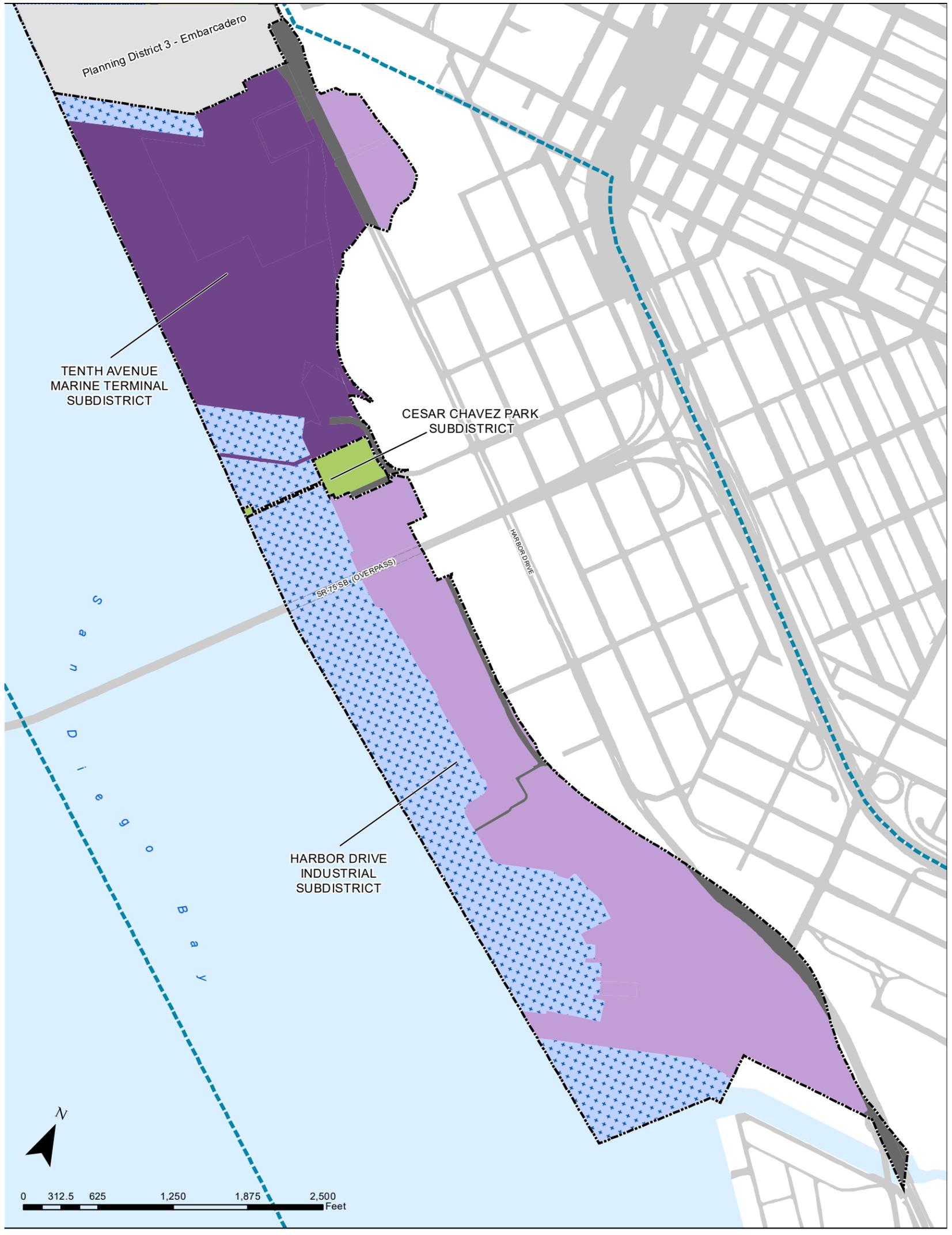
Certified PMP Designations (Existing)	Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Water Use				
Specialized Berthing	104.07	<i>(Consolidated to Industrial and Deep-Water Berthing)</i>	--	--
Terminal Berthing	10.8	<i>(Consolidated to Industrial and Deep-Water Berthing)</i>	--	--
<i>Total Consolidated Industrial and Deep-Water Berthing</i>	114.87	Industrial and Deep-Water Berthing	114.50	-0.37
Total Water Use	114.87	Total Water Use	114.50	-0.37
Land Use				
Marine Related Industrial	172.88	Maritime Services and Industrial	127.40	-45.48 ¹
Marine Terminal	58.07	Marine Terminal	105.62	+47.55 ²
Park/Plaza	4.23	Recreation Open Space	4.63	+0.40
Streets	17.95	Institutional/Roadway	16.04	-1.91 ³
Total Land Use	253.13	Total Land Use	253.69	+0.56

¹ Reduced acreage from redistribution to Marine Terminal.

² Additional acreage from redistribution of Marine Related Industrial.

³ Reduced acreage from redistribution to Maritime Services and Industrial and Marine Terminal, other Institutional/Roadway areas added but overall Institutional/Roadway acreage in planning district decreased from Streets in Certified PMP (GIS Conversion).

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JURISDICTIONAL BOUNDARIES

-  Planning Subdistricts
-  Coastal Zone

LAND USE DESIGNATIONS

-  Institutional / Roadway
-  Marine Terminal
-  Maritime Services and Industrial
-  Recreation Open Space

WATER USE DESIGNATIONS

-  Industrial and Deep Water Berthing

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Figure 3-8
PD4: Working Waterfront Water and Land Use Map
Port Master Plan Update

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Tenth Avenue Marine Terminal Subdistrict

The Tenth Avenue Marine Terminal Subdistrict abuts PD3 on the north and roughly encompasses the water and land area bounded by Park Boulevard (the Hilton San Diego Bayfront Hotel), Harbor Drive and a portion of the railyards east of Harbor Drive, Cesar E. Chavez Parkway and the Cesar Chavez Pedestrian Pier, and the Bay (see Figure 3-8). The PMPU does not propose any changes to the cargo throughput or improvements for this subdistrict in comparison to what was previously approved as part of the *Tenth Avenue Marine Terminal Redevelopment Plan* and analyzed in the TAMT Redevelopment Plan PEIR (SCH# 2015-031046), which is incorporated herein by reference.¹⁴ As detailed below, planned improvements in the Tenth Avenue Marine Terminal Subdistrict will add new or enhance existing mobility connections to allow for safe public access for pedestrians and bicyclists, as well as roadway reconfigurations and improvements, often through interagency coordination. There are no planned improvements related to railroad reconfigurations for this subdistrict.

Vision

The vision for this subdistrict is a modern marine terminal that serves as a vital, global gateway for imports and exports supported by safe, efficient, and environmentally sensitive operations and technology. The subdistrict would have mobility connections to access the terminal, enhanced infrastructure that provides convenient and safe access to jobs, and safe public access for pedestrians and bicyclists. Modifications to modernize the marine terminal will help to optimize sustainable terminal operations while ensuring that it remains flexible and responsive to future market conditions and the environment. The modifications will include upgraded facilities and a competitive and sustainable freight movement system that handles cargo in an efficient, safe, and environmentally responsible way.

Special Allowances

There are no special allowances proposed for this subdistrict.

Planned Improvements

Proposed planned improvements related to landside access for this subdistrict involve modifications to the entire segment of northbound and southbound Harbor Drive within the District's jurisdiction to provide a multi-use pathway and to include one "flexible" lane in each direction (further described in appealable projects below). The District would also coordinate with transportation agencies and adjacent jurisdictions to reconfigure portions of Harbor Drive outside the District's jurisdiction to implement roadway improvements consistent with the improvements described above supporting improved efficiency and safety for vehicular traffic, goods movement, and pedestrian and bicycle facilities. The District would also coordinate with adjacent jurisdictions to provide appropriate signage to identify designated truck routes, and coordinate with the City of San Diego to ensure that truck route requirements and truck parking prohibitions in adjacent neighborhoods are followed.

¹⁴ TAMT Available at: <https://www.portofsandiego.org/projects/tenth-avenue-marine-terminal-redevelopment> (click links for Parts 1 through 4).

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable project for the Tenth Avenue Marine Terminal Subdistrict:

- Modify the entire segment of northbound and southbound Harbor Drive within the District's jurisdiction by including one multi-use pathway (as described in the section above) and one "flexible" lane in each direction that is dedicated for trucks, transit buses, and/or shuttles with an information technology system (or similar technology) and signalization improvements that can be modified or adjusted during peak and nonpeak hours between the Tenth Avenue Marine Terminal's back gate and Cesar Chavez Parkway.

Development Standards

Consistent with the *Tenth Avenue Marine Terminal Redevelopment Plan*, the proposed PMPU incorporates proposed development standards for public realm (e.g., views) and goods movement standards (e.g., freight movement, sustainable freight and shipping methods, dry bulk goods conveyance, and parking). Proposed public realm standards include limitations to the size, bulk, and scale of any permanent devices and/or dry docks intended to lift vessels from the water for service or repair in order to preserve scenic vista areas in the Cesar Chavez Park Subdistrict. The development standards also propose standards for goods movement, including requiring use of designated truck routes, implementation of sustainable freight and shipping methods to achieve the emissions reductions goals of the California Sustainable Freight Action Plan or similar future plans (such as vessel speed reduction program, requiring development on the terminal to implement electrification, installation of electric infrastructure, onsite energy production and battery storage, and infrastructure for zero-emission vehicles and trucks), and expanding shore power capabilities. In addition, the development standards propose implementation of the best available control and retrofit technologies for conveyer systems and bulk discharge unloaders for future dry bulk operations. Parking requirements are also identified.

Cesar Chavez Park Subdistrict

The Cesar Chavez Park Subdistrict includes the land area and a pier nestled between the Tenth Avenue Marine Terminal and the Harbor Drive Industrial Subdistricts. This subdistrict currently consists almost entirely of the park and an adjacent roadway, as well as the Cesar Chavez Pedestrian Pier (see Figure 3-8).

Vision

The vision for the Cesar Chavez Park Subdistrict is to protect and enhance recreation and public access opportunities at Cesar Chavez Park by preserving the existing recreational character of the area, while providing better accessibility to the public, through enhanced water and land mobility connections and infrastructure improvements that provide physical and visual public access opportunities at Cesar Chavez Park.

Special Allowances

There are no special allowances proposed for this subdistrict.

Planned Improvements

Proposed planned improvements for this subdistrict include public access improvements related to landside access involving modification, or replacement in-kind, of pathways to Cesar Chavez Park and the Cesar Chavez Pedestrian Pier, and expanding public access by providing a connection to the Bayshore Bikeway. The District proposes to collaborate with adjacent jurisdictions to improve rail and road crossings for pedestrians and bicycles, including to and from Barrio Logan Trolley Station and to and from Cesar Chavez Park, to increase safety and prioritize active transportation users by providing high-visibility crosswalks and designated controlled crossings. Finally, interpretive signage and wayfinding in the scenic vista area on the Cesar Chavez Pedestrian Pier is proposed to be incorporated to guide safe public viewing of the waterfront.

Proposed coastal access improvements include the development of a water-based transfer point at the pedestrian pier as well as providing direct, physical access to the water via step-down areas or to support other opportunities that restore or enhance ecological value.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable project for this subdistrict:

- Modify Cesar Chavez Parkway to accommodate vehicular traffic while allowing for pedestrian, bicycle, and mobility enhancements. This includes partnering with adjacent jurisdictions to support urban greening efforts, such as walkability improvements, enhanced tree canopy, and stormwater treatment opportunities, consistent with the City of San Diego's planned Bay to Park link along Cesar Chavez Parkway between 25th Street and Cesar Chavez Park.

Development Standards

Proposed public realm standards include the establishment of scenic vistas for the following:

- View of the Bay from the promenade along Cesar Chavez Park, north of the Cesar Chavez Pedestrian Pier.
- View of the Bay from the western end of the Cesar Chavez Pedestrian Pier.

In addition, development standards propose that permanent above-water vessel repair operations shall not affect views from designated scenic vista areas.

Harbor Drive Industrial Subdistrict

The Harbor Drive Industrial Subdistrict includes the water and land area located southwest of Harbor Drive between Cesar Chavez Park and Chollas Creek (see Figure 3-8).

Vision

The proposed vision for this subdistrict is a premier and high-performing center for shipbuilding and ship repair for the defense and maritime industries, with dedicated mobility connections to access this center and enhanced infrastructure that provides convenient and safe access to jobs. This

includes upgraded facilities and a competitive and sustainable freight movement system that handles cargo in an efficient, safe, and environmentally responsible way.

Special Allowances

There are no special allowances proposed for this subdistrict.

Planned Improvements

Proposed planned improvements related to landside access for this subdistrict involve modifications to the entire segment of northbound and southbound Harbor Drive within the District's jurisdiction to: provide a multi-use pathway; include one "flexible" lane in each direction (further described in appealable projects below); and develop additional bus/truck loading, parking, and queuing areas to facilitate better drop-off movements at Belt Street and Sampson Street.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable project for this subdistrict:

- Modifying northbound and southbound Harbor Drive to include one multi-use pathway (as described in the section above) and develop additional bus/truck loading, parking, and queuing (as described in the section above), and one "flexible" lane in each direction, that is dedicated for trucks, transit buses, and/or shuttles, with an information technology system (or similar technology) and signalization improvements that can be modified and/or adjusted during peak and nonpeak hours between Schley Street and 32nd Street.

Development Standards

The proposed development standards for the Harbor Drive Industrial Subdistrict apply to goods movement, and relate to sustainable shipyards, truck routes, and parking. Specifically, development would be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. Proposed truck route development standards include use of designated truck routes to, from, and through the planning district and coordination with the City of San Diego to ensure that truck route requirements and truck parking prohibitions in adjacent neighborhoods are followed. Proposed parking development standards may include a multi-phased approach, such as District occupants, tenants, and permittees at the Harbor Drive Industrial Subdistrict collectively or individually establishing an offsite parking strategy to ensure that workers do not adversely affect adjacent areas and coordinating with the City of San Diego and other regional partners to address workforce parking, including implementing a shared parking facility or other parking solutions, for public off-street parking.

3.5.3.5 Planning District 5: National City Bayfront (Not a Part of the Proposed PMPU)

The National City Bayfront Planning District (PD5), often referred to as the “National City Balanced Plan,” is an amendment to the existing certified PMP, and associated use designations have not been included and are not a part of the proposed PMPU, as the draft EIR for the National City Balanced Plan PMP amendment has been circulated for public review. The National City Balanced Plan PMP amendment could likely be certified prior to the CCC’s consideration of the proposed PMPU. This existing planning district and associated use designations were not revised or readopted as part of the PMPU. However, the buildout of the National City Bayfront is a cumulative project, as listed in Chapter 2, *Environmental Setting*. Therefore, analysis of any future development within this planning district is not included in this Draft PEIR, except as a cumulative project analyzed in the discussion of cumulative impacts in Chapter 4.

3.5.3.6 Planning District 6: Chula Vista Bayfront (Not a Part of the Proposed PMPU)

The bayfront area of the Chula Vista Bayfront Planning District (currently PD7 but proposed to be PD6 in the updated Port Master Plan) has already undergone an extensive update and planning process, known as the Chula Vista Bayfront Master Plan (CVBMP). The EIR and Port Master Plan Amendment for the CVBMP were approved by the District in 2010 and certified by the CCC in 2012. The CVBMP is currently being implemented. The PMPU does not propose any changes in the Chula Vista Bayfront Planning District and associated use designations.

However, buildout of the Chula Vista Bayfront Master Plan is considered a past, present, or probable future project with related impacts. Therefore, the CVBMP is one of the cumulative projects included in the analysis of cumulative impacts in Chapter 4 of this Draft PEIR.

3.5.3.7 Planning District 7: South Bay

The South Bay Planning District (PD7) includes both water and land areas at the southern end of San Diego Bay. Located adjacent to the San Diego Bay National Wildlife Refuge, the planning district offers a diverse range of natural resources and ecosystems. A portion of the Bayshore Bikeway near the planning district offers both physical and visual access to the Bay. The South Bay Planning District encompasses a total area of 211.9 acres, including 210.5 acres of water area and 1.4 acres of land area, at the southerly end of San Diego Bay. The Final EIR and The Wetland Mitigation Bank at Pond 20 project was approved by the Board of Port Commissioners on April 13, 2021, and a Port Master Plan Amendment is currently in process to incorporate the wetland mitigation bank parcel into the existing Port Master Plan. As discussed in Chapter 2, the Wetland Mitigation Bank at Pond 20 project is not included in the PMPU but is considered as a cumulative project and is part of the cumulative analyses contained within Chapter 4 of this Draft PEIR. There are no subdistricts identified for PD7.

Proposed Water and Land Use Designation

Proposed water and land use designations for PD7, as well as the proposed acreages of each, are provided in Table 3-10. As shown, the proposed water use designation is Conservation/Intertidal, and the proposed land use designation is Institutional/Roadway. The proposed water and land use map for PD7 is provided on Figure 3-9.

Table 3.10. South Bay Planning District Water and Land Use Designations

Certified PMP Designations (Existing)	Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Water Use				
Estuary	110.65	Conservation/Intertidal	210.53	+99.88 ¹
Total Water Use	110.65	Total Water Use	210.53	+99.88¹
Land Use				
Wetlands	101.33	<i>(acreage redistributed as a water use to Conservation/Intertidal)</i>	--	-101.33 ²
--	--	Institutional/Roadway	1.45	+1.45 ³
Total Land Use	101.33	Total Land Use	1.45	-99.88

¹ Additional acreage from redesignation of Wetlands to a water use.

² Reduced acreage from redesignation of Wetlands to a water use and distribution to Institutional/Roadway.

³ Additional acreage from redistribution of Wetlands.

Vision

The proposed vision for the South Bay Planning District is to preserve the existing coastal and intertidal habitats and natural resources in this area through complementary habitat restoration and creation activities. Maintaining the connection between the Bayshore Bikeway and Tidelands is also a part of the vision, along with improving public access opportunities through views and linkages for the enjoyment of the Bay's natural beauty.

Given the natural character of this planning district, the PMPU proposes no special allowances, coastal access requirements, or development standards for this district.

Special Allowances

There are no special allowances proposed for this planning district.

Planned Improvements

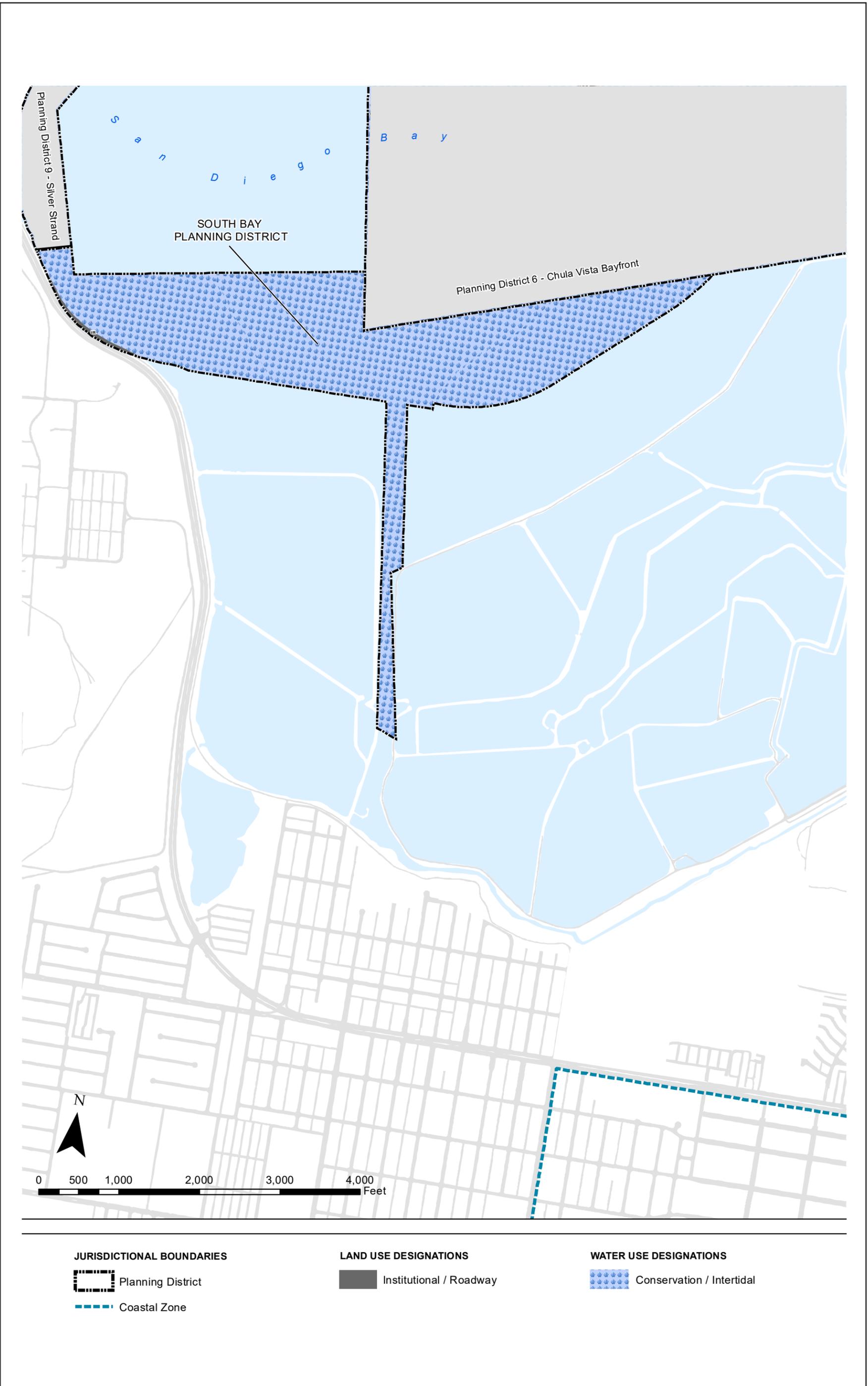
There are no planned improvements proposed for this planning district.

Appealable Projects

There are no appealable projects proposed for this planning district.

Development Standards

There are no development standards proposed for this planning district.



JURISDICTIONAL BOUNDARIES

-  Planning District
-  Coastal Zone

LAND USE DESIGNATIONS

-  Institutional / Roadway

WATER USE DESIGNATIONS

-  Conservation / Intertidal

Figure 3-9
PD7: South Bay Water and Land Use Map
Port Master Plan Update

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3.5.3.8 Planning District 8: Imperial Beach Oceanfront

The Imperial Beach Oceanfront Planning District (PD8) is located along the Pacific Ocean shoreline within the City of Imperial Beach from roughly Carnation Avenue on the north to just beyond the terminus of Seacoast Drive on the south. The Imperial Beach Oceanfront Planning District includes retail, restaurant, and open space uses. Beach- and water-based recreational activities, community beach festivals, and special events are among the public access opportunities available along the shoreline. The sandy ocean beach is a prominent public amenity and natural physical asset, and the Imperial Beach Pier provides visitors with fishing opportunities, expansive views, and commercial recreation facilities. PD8 comprises a total of 404.17 acres, the majority of which is water (402.03 acres) with smaller landside areas (2.1 acres). There are no subdistricts proposed for PD8.

Proposed Water and Land Use Designations

Proposed water and land use designations for PD8, as well as the proposed acreages of each, are provided in Table 3-11. As shown, the water use designation in PD8 is Open Bay/Water. The proposed land use designations are Commercial Recreation, Institutional/Roadway, and Recreation Open Space. The proposed water and land use map for PD8 is provided on Figure 3-10.

Table 3-11. Imperial Beach Oceanfront Planning District Water and Land Use Designations

Certified PMP Designations (Existing)	Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Water Use				
Sportfishing Berthing	0.08	<i>(Not proposed in this planning district)</i>	--	-0.08
Open Ocean	393.12	Open Bay/Water	402.03	+8.91 ¹
Total Water Use	393.20	Total Water Use	402.03	+8.83
Land Use				
Commercial Recreation	1.67	Commercial Recreation	1.05	-0.62
Park/Plaza	0.26	Recreation Open Space	0.95	+0.69
Public Service Facility	0.13	<i>(Consolidated to Institutional/Roadway)</i>	--	--
Street	3.1 ²	<i>(Area removed from the PMPU)</i>	--	--
		Institutional/Roadway	0.13	0.13
Total Land Use	2.06	Total Land Use	2.13	+0.07

¹ Additional acreage from updated boundary ² From existing PMP not GIS Conversion, and not accounted for in total land use for this planning district.

Vision

The proposed vision for PD8 is to create a prominent public destination with safe coastal access and opportunities for visitors to explore the area and enjoy the spectacular ocean views. Development intensity is proposed to increase in this planning district to accommodate additional visitor-serving uses and potential aquaculture opportunities. Safe public access would continue to be integrated into new development to enhance physical and visual access and recreation opportunities, as well as provide improved pedestrian features for visitors.

Special Allowances

There are no special allowances proposed for this planning district.

Planned Improvements

Proposed planned improvements associated with landside access would involve development of a Connector Mobility Hub in the vicinity of Seacoast Drive and Elkwood Avenue (see Figure PD8.3 of the proposed PMPU). The PMPU proposes modification of public access to the shoreline, oceanfront, and the pier to include wayfinding signage and pedestrian lighting, as well as the development of bicycle parking at the Imperial Beach Pier Plaza for the Imperial Beach Pier. The public services facility (Dempsey Holder Safety Center) would be allowed to remain, the existing public amenities at Dunes Park on Daisy Avenue would be maintained, and up to three activating features, one of which may be a pavilion, are proposed to be developed at Dunes Park.

Proposed coastal access planned improvements would involve maintenance of contiguous coastal access along the perimeter of the pier; provision of a 150-foot wide pier safety zone in the ocean to separate swimmers, surfers, and watercraft from the potential hazards of submerged obstructions, collisions with pier pilings, and entanglement with fish hooks and lines; and modifications to the Imperial Beach Pier and Pier Plaza, including but not limited to development that serves beach visitors, such as seasonal activating features and recreational equipment rental along the length of the pier, installation of overwater lighting on the pier, and expansion of the pier, as needed and feasible, to provide additional public and shoreside open space in the area.

For visitor-serving commercial uses, the PMPU proposes modification or replacement-in-kind of the existing visitor-serving uses in the Pier Plaza building, and the development of up to 15,000 square feet of restaurant space, which could be substituted for development of up to 15,000 square feet of retail and/or retail with restaurant space as indicated in the *Appealable Projects* section below on the Palm Avenue and Elkwood Avenue parcels.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

Proposed appealable projects for PD8 are as follows:

- Modify, or replace in-kind, the existing pier building, with a potential increase of up to 3,000 additional square feet of Retail and/or Retail with Restaurant space, to improve visual and physical access at the western end of the pier.
- On the Palm Avenue and Elkwood Avenue sites designated Commercial Recreation, develop up to 15,000 additional square feet of Retail and/or Retail with Restaurant space, which could be substituted for development of up to 15,000 square feet of restaurant space as indicated in the *Planned Improvements* above.

Development Standards

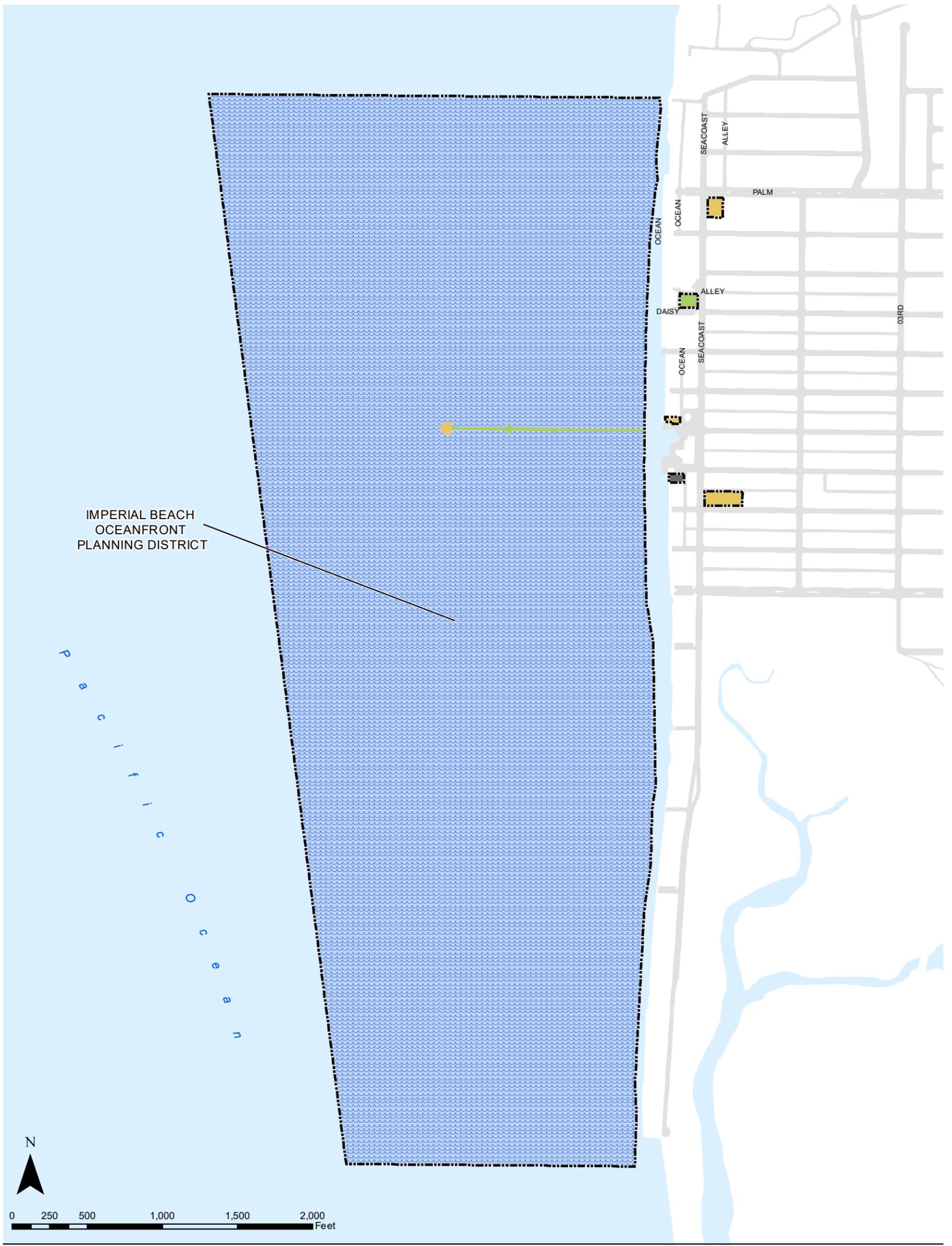
The PMPU proposes the preservation of the following scenic vistas within PD8:

- View of the ocean to the north, from the north side of the Imperial Beach Pier.
- View of the ocean to the south, from the south side of the Imperial Beach Pier.

- View of the ocean to the west, from the west end of the Imperial Beach Pier.

In addition, the PMPU proposes that structures, other than those on Imperial Beach Pier, must not exceed 30 feet in height and shall not have more than three stories. Structures on Imperial Beach Pier shall not exceed 26 feet in height from the deck of the pier and will not have more than one story. Development standards related to parking include collaboration with the City of Imperial Beach to implement parking solutions related to public off-street parking.

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JURISDICTIONAL BOUNDARIES

 Planning District

LAND USE DESIGNATIONS

-  Commercial Recreation
-  Institutional / Roadway
-  Recreation Open Space

WATER USE DESIGNATIONS

 Open Bay / Water

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3.5.3.9 Planning District 9: Silver Strand

The Silver Strand Planning District (PD9) is located in the southwest corner of San Diego Bay, east of Silver Strand State Beach. A variety of recreational activities are provided in this planning district, including walking along nature trails, enjoying expansive views of the Bay, and bird watching. Additional features include visitor-serving commercial amenities, such as hotels and restaurants, as well as recreational boat berthing marinas. Piers and docks with no associated public access extend into the planning district from off-Tidelands residences. PD9 is divided into three subdistricts and includes a total of 231.7 acres, with 199.1 acres of water area and 32.6 acres of land area.

Proposed Water and Land Use Designations

Proposed water and land use designations are provided in Table 3-12. Proposed, primary water use designations would include Anchorage, Conservation/Intertidal, Navigation Corridor, Open Bay/Water, and Recreational Berthing. Allowable land use designations would include Commercial Recreation, Institutional/Roadway, and Recreation Open Space. The proposed water and land use map for PD9 is provided on Figure 3-11.

Table 3-12. Silver Strand Planning District Water and Land Use Designations

Certified PMP Designations (Existing)	Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Water Use				
Recreational Boat Berthing	37.84	Recreational Berthing	26.53	-11.31 ¹
Open Bay/Water	84.93	Open Bay/Water	95.88	+10.95 ²
Boat Anchorage	--	Anchorage	7.50	+7.54 ³
Estuary	5.76	Conservation/Intertidal	50.64	+44.88 ⁴
Boat Navigation Corridor	59.69	Navigation Corridor	22.12	-37.57 ⁵
Total Water Use	188.22	Total Water Use	202.72	+14.50
Land Use				
Commercial Recreation	30.54	Commercial Recreation	20.76	-9.78 ⁶
Open Space	1.94	<i>(Consolidated to Recreation Open Space)</i>	--	--
Park/Plaza	4.24	<i>(Consolidated to Recreation Open Space)</i>	--	--
<i>Total Consolidated Recreation Open Space</i>	6.18	Recreation Open Space	9.02	+2.84 ⁷
Streets	2.76	Institutional/Roadway	2.76	0.00
Total Land Use	39.48	Total Land Use	32.54	-6.94

¹ Reduced acreage from redistribution to Conservation/Intertidal.

² Additional acreage from redistribution of Boat Navigation Corridor.

³ Certain water parcels had previously been assigned designations in the Certified PMP for informational purposes but were not a part of the District's coastal permitting authority. Pursuant to SB 507, those parcels have since been granted to the District from the California State Lands Commission. Thus, for consistency, parcels that had previously been assigned designations in the Certified PMP and have been granted to the District pursuant to SB 507 are proposed to be incorporated into the proposed PMPU area and within the District's coastal permitting authority. In PD9, this includes an additional Anchorage parcel in State Park Basin.

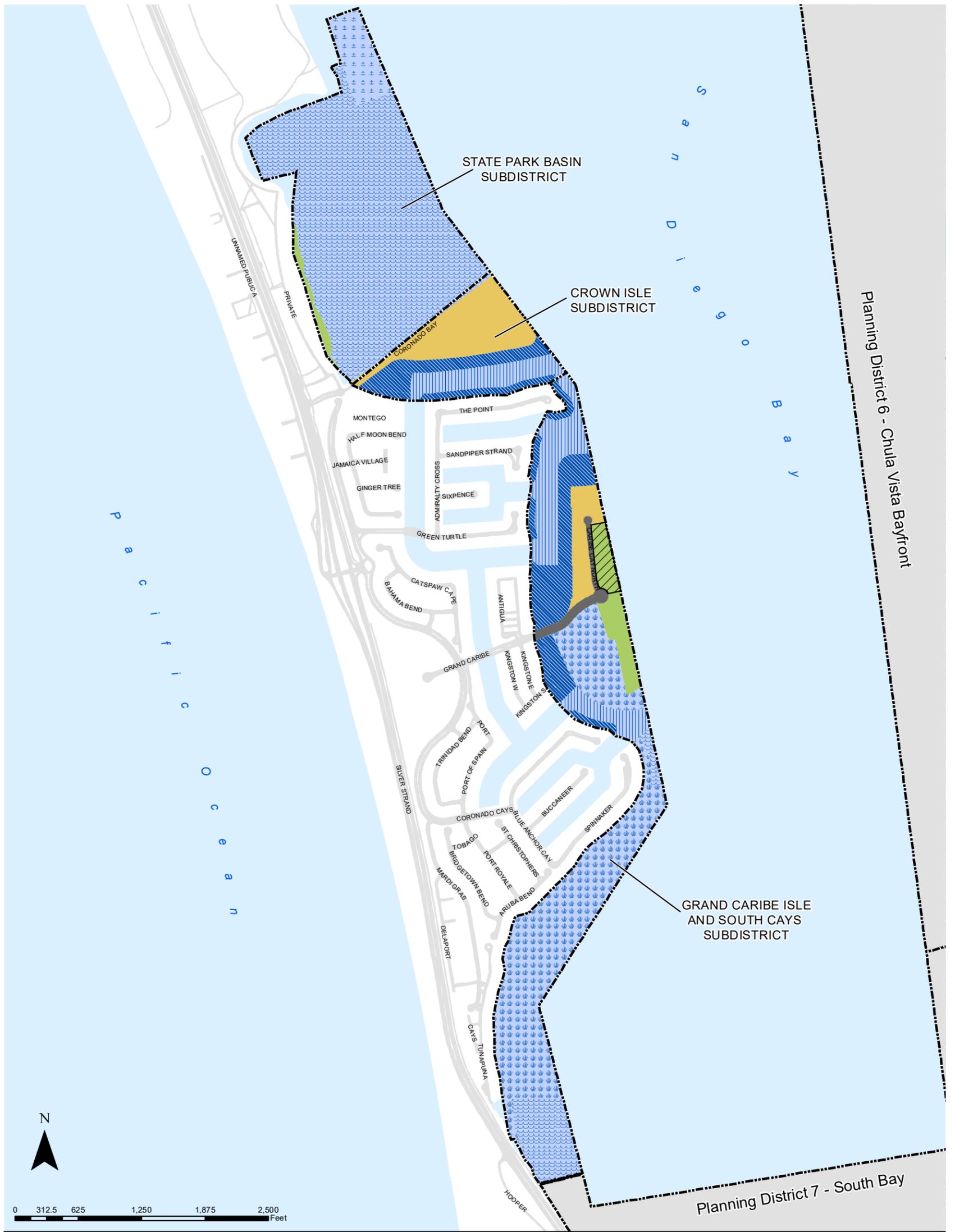
⁴ Additional acreage from redistribution of Boat Navigation Corridor and Recreational Boat Berthing.

⁵ Reduced acreage from redistribution to Conservation/Intertidal and Open Bay/Water.

⁶ Reduced acreage from redistribution to Conservation/Intertidal and Recreation Open Space.

⁷ Additional acreage from redistribution of Commercial Recreation.

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JURISDICTIONAL BOUNDARIES

Planning Subdistricts

A parcel consisting of approximately 2.38 acres on the northern portion of Grand Caribe Isle in the Grand Caribe Isle and South Cays Subdistrict of Planning District 9 is subject to an existing lease which expires in 2034 (District Document No. 17678). Under the Port Master Plan Update, the Commercial Recreation land use designation has been changed to Recreational Open Space (ROS). Notwithstanding the ROS designation, nothing in the Port Master Plan Update shall impair or infringe upon any rights or obligations existing under the lease when the Port Master Plan Update took effect.

LAND USE DESIGNATIONS

- Commercial Recreation
- Institutional / Roadway
- Recreation Open Space

WATER USE DESIGNATIONS

- Anchorage
- Conservation / Intertidal
- Navigation Corridor
- Open Bay / Water
- Recreational Berthing

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State Park Basin Subdistrict

The State Park Basin Subdistrict consists primarily of the water area (Crown Cove) and shoreline on the east side of the Silver Strand, south of an undeveloped parcel that lies south of the Lincoln Military Housing and north of Coronado Bay Road (see Figure 3-11). The State Park Basin Subdistrict is adjacent to Silver Strand State Beach, which provides both overnight campsites and day use areas, and Crown Cove Aquatic Center, which provides recreational activities such as paddling, sailing, kayaking, surfing, and safe boating education. Park facilities include four large parking lots, which can accommodate up to 1,000 vehicles. Restroom and cold showers are available on each side of the park. Southwestern College operates the aquatic center at Silver Strand State Beach in collaboration with the California Department of Parks and Recreation and California Division of Boating and Waterways.

Vision

The proposed vision for this subdistrict is to preserve the existing character of the area, protect natural resources through environmental restoration and habitat preservation, and honor its connection to the water, by maintaining and enhancing its recreational marinas and scenic views of San Diego Bay and its wildlife.

Special Allowances

There are no special allowances proposed for this subdistrict.

Planned Improvements

Proposed planned improvements include maintenance of the existing recreational marina-related facilities at the Crown Cove Aquatic Center, and modification or replacement-in-kind of the moorings at the Crown Cove Anchorage (A-7).

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable project for this subdistrict:

- Allow for modifications to moorings to allow for an increase of five moored vessels at the Crown Cove Anchorage (A-7), provided the boundaries of the anchorage do not change and there is no unmitigated increase in shading or fill.

Development Standards

The proposed development standards identify the preservation of the following scenic vista:

- View east from the shore in front of the Crown Cove Aquatic Center.

Additionally, the District shall coordinate with the adjacent jurisdiction to provide and maintain access to recreational areas and scenic view areas in this subdistrict.

Crown Isle Subdistrict

The Crown Isle Subdistrict consists of the water and land area of Crown Isle, including the existing resort and a marina, and is abutted by Crown Cove to the north and Coronado Cays to the south (see Figure 3-11).

Vision

The proposed vision for this subdistrict is to honor Crown Isle's connection to the water, and protect the subdistrict's natural resources while preserving its unique mix of recreational boat berthing marinas and visitor-serving commercial amenities. The proposed intensity of commercial development is to remain generally unchanged in the Crown Isle Subdistrict because modifications to the commercial areas are planned to occur within the existing footprint of the development. Proposed modifications or in-kind replacements for existing hotel rooms, including associated retail and/or restaurant, may be allowed if they are limited to the same or lesser size and in the same general footprint. Any proposed future development or planned improvements in the Crown Isle Subdistrict are intended to further enhance the area while being consistent with the subdistrict's character.

Special Allowances

Coronado Cays Residential Piers and Docks

Residential piers and docks adjacent to off-Tidelands residences in the Coronado Cays may be repaired or replaced in-kind provided changes in configuration result in no net increase in square footage of occupied surface area coverage of San Diego Bay water and/or fill in the Bay floor.

Planned Improvements

Proposed planned improvements related to landside access include the development of a Connector Mobility Hub, or a larger hub, south of the existing hotel along Coronado Bay Road, including wayfinding and pathway connections to connect with the existing water-based transfer point and short-term public docking. Proposed coastal access improvements would include modification or replacement in-kind of the existing water-based transfer point south of the existing hotel and modification or replacement in-kind of the existing short-term public docking located south of the existing hotel. In addition, the PMPU proposes the modification or replacement of marina-facilities. Proposed planned improvements related to visitor-serving commercial uses would allow for modification or replacement in-kind of existing hotel rooms, including associated retail, restaurant, and/or meeting space to the same or lesser square footage and room count and the same general footprint. The proposed PMPU does not plan for any new hotel rooms in this subdistrict.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable project for this subdistrict:

- Develop up to 10 additional recreational boat berthing vessel slips in association with existing recreational marina-related facilities in the subdistrict.

Development Standards

The proposed development standards include the provision of a continuous waterside promenade with a minimum width of 12 feet as part of all development abutting the waterfront that is not considered a coastal-dependent maritime industrial use to offer public coastal access along the waterfront. In addition, the PMPU proposes that structures shall not exceed 35 feet in height, and that modification or replacement in-kind of existing visitor-serving commercial uses would be consistent with the following: building design must be compatible with the character of the surrounding community, with a minimum 15 percent of the site area set aside for landscaping, exclusive of any required parking areas.

Grand Caribe Isle and South Cays Subdistrict

The Grand Caribe Isle and South Cays Subdistrict consists primarily of the water area and shoreline as well as the Grand Caribe Shoreline Park, on the east side of the Silver Strand abutting the east side of the Coronado Cays residential community (see Figure 3-11).

Vision

The vision for this subdistrict is to continue to honor Grand Caribe Isle and South Cays' connection to the water with small-scale amenities and access improvements, environmental restoration, and habitat creation. The intensity of development is not planned to significantly increase because modifications are intended to enhance the recreational and public access aspects of the area. Planned improvements in the Grand Caribe Isle and South Cays Subdistrict are intended to add new or enhance existing amenities that support the area's ties to the recreational boating community, such as public docking and marina areas and the addition of a water-based transfer point. Planned public access improvements will enhance physical and visual access through new public pathways and recreational areas that provide opportunities to enjoy views of the Bay and the neighboring natural open space, as well as enhance the area's connection to the region through the Bayshore Bikeway. Environmental restoration and habitat creation in this area will continue to protect the subdistrict's natural resources.

Special Allowances

Coronado Cays Residential Piers and Docks

Residential piers and docks adjacent to off-Tidelands residences in the Coronado Cays may be repaired or replaced in-kind provided changes in configuration result in no net increase in square footage of occupied surface area coverage of San Diego Bay water and/or fill in the Bay floor.

Planned Improvements

Proposed planned improvements related to recreation and landside access include expansion of the Grand Caribe Shoreline Park to the north of the Grand Caribe Causeway and that adjacent development in Commercial Recreation areas shall include amenities to serve the public visiting Grand Caribe Shoreline Park, and coordination with adjacent jurisdictions to maintain connections between the Bayshore Bikeway and Tidelands.

Proposed coastal access planned improvements would involve development of a water-based transfer point at the northern portion of Grand Caribe. The PMPU also proposes planned improvements to allow for modification or replacement in-kind of existing recreational marina-

related facilities on Grand Caribe Isle. No new hotel rooms would be allowed under the proposed PMPU.

Proposed planned improvements relate to the creation of wetland habitat to be used as a mitigation bank at Grand Caribe Isle south.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable projects for this subdistrict:

- Develop short-term public docking slips at the northern portion of Grand Caribe in association with recreational marina-related facilities, as generally depicted on Figure PD9.3 of the proposed PMPU.
- Develop up to 10 additional recreational boat berthing vessel slips in association with existing recreational marina-related facilities in the subdistrict. Landside facilities must be small-scale, water-oriented or marina-related development that is in character with the scale and size of the existing surrounding development.

Development Standards

The proposed development standards call for the provision of a continuous waterside promenade or nature trail, or a combination of the two, as part of all development abutting the waterfront that is not a coastal-dependent maritime industrial use to offer public access along the waterfront. North of Grand Caribe Causeway, extending to the west side of Grand Caribe Isle along the basin, looping around the north side of Grande Caribe Isle, the nature trail or waterside promenade shall have a minimum width of 6 feet, and south of Grand Caribe Causeway, on the east side/bayside of Grand Caribe Isle, in the areas with a Recreation Open Space land use designation and extending to the southern point of Grand Caribe Isle, the existing, continuous nature trail shall be maintained and shall not exceed 6 feet in width. The development standards also propose the preservation of the following scenic vista areas:

- View of the Bay from Grand Caribe Shoreline Park, and
- View of the Bay from the northeast portion of Grand Caribe.

Development standards also include preservation of the Grand Caribe Causeway View Corridor Extension.

In addition, the PMPU proposes that structures shall not exceed 35 feet in height, and building design shall be water-oriented and context-sensitive to the Coronado Cays community, surrounding Commercial Recreation development west of Caribe Cay North Boulevard, and views of the Bay, with a minimum 15 percent of the development site landscaped, and required parking spaces shall not be considered as portion of the required landscaping.

3.5.3.10 Planning District 10: Coronado Bayfront

The Coronado Bayfront Planning District (PD10) is located along the northern and eastern bayfront of the City of Coronado. The Coronado Bayfront Planning District includes recreation and shopping areas that have a strong relationship with the surrounding Coronado neighborhoods in the City of

Coronado. It is a recreational jewel on the Bay, providing strong public access to the shoreline, coastal-dependent activities, and passive and active open space, as well as other recreational opportunities and diverse opportunities for east-facing views of the Bay and the San Diego skyline and waterfront. PD10 includes a total of 272.7 acres, with 102.9 acres of water area and 169.8 acres of land area. PD10 is divided into two subdistricts, North Coronado Subdistrict and South Coronado Subdistrict, which are separated by the San Diego-Coronado Bridge.

Proposed Water and Land Use Designations

Proposed water and land use designations for PD10, as well as the proposed acreages of each, are provided in Table 3-13. As shown, primary water use designations would include Anchorage, Open Bay/Water, and Recreational Berthing. Allowable land use designations would include Commercial Recreation, Institutional/Roadway, and Recreation Open Space. The proposed water and land use map for PD10 is provided on Figure 3-12.

Table 3-13. Coronado Bayfront Planning District Water and Land Use Designations

Certified PMP Designations (Existing)	Acres (GIS Conversion)	Proposed PMPU Designations	Acres	Net Change (acres)
Water Use				
Recreational Boat Berthing	21.66	Recreational Berthing	26.48	+4.82 ¹
Open Bay/Water	76.32	Open Bay/Water	143.19	+66.87 ^{2,4}
<i>Boat Anchorage</i>	4.93 ³	Anchorage	49.76	+44.83 ⁴
Total Water Use	102.91	Total Water Use	219.43	+116.52
Land Use				
Commercial Recreation	27.77	Commercial Recreation	28.70	+0.93
Golf Course	100.14	<i>(Consolidated to Recreation Open Space)</i>	--	--
Open Space	5.63	<i>(Consolidated to Recreation Open Space)</i>		
Park/Plaza	28.86	<i>(Consolidated to Recreation Open Space)</i>	--	--
<i>Total Consolidated Recreation Open Space</i>	134.63	Recreation Open Space	135.86	+1.23 ⁵
Streets	6.55	Institutional/Roadway	6.55	0.00
Total Land Use	168.95	Total Land Use	171.10	+2.15

¹ Additional acreage from redistribution of Open Bay/Water

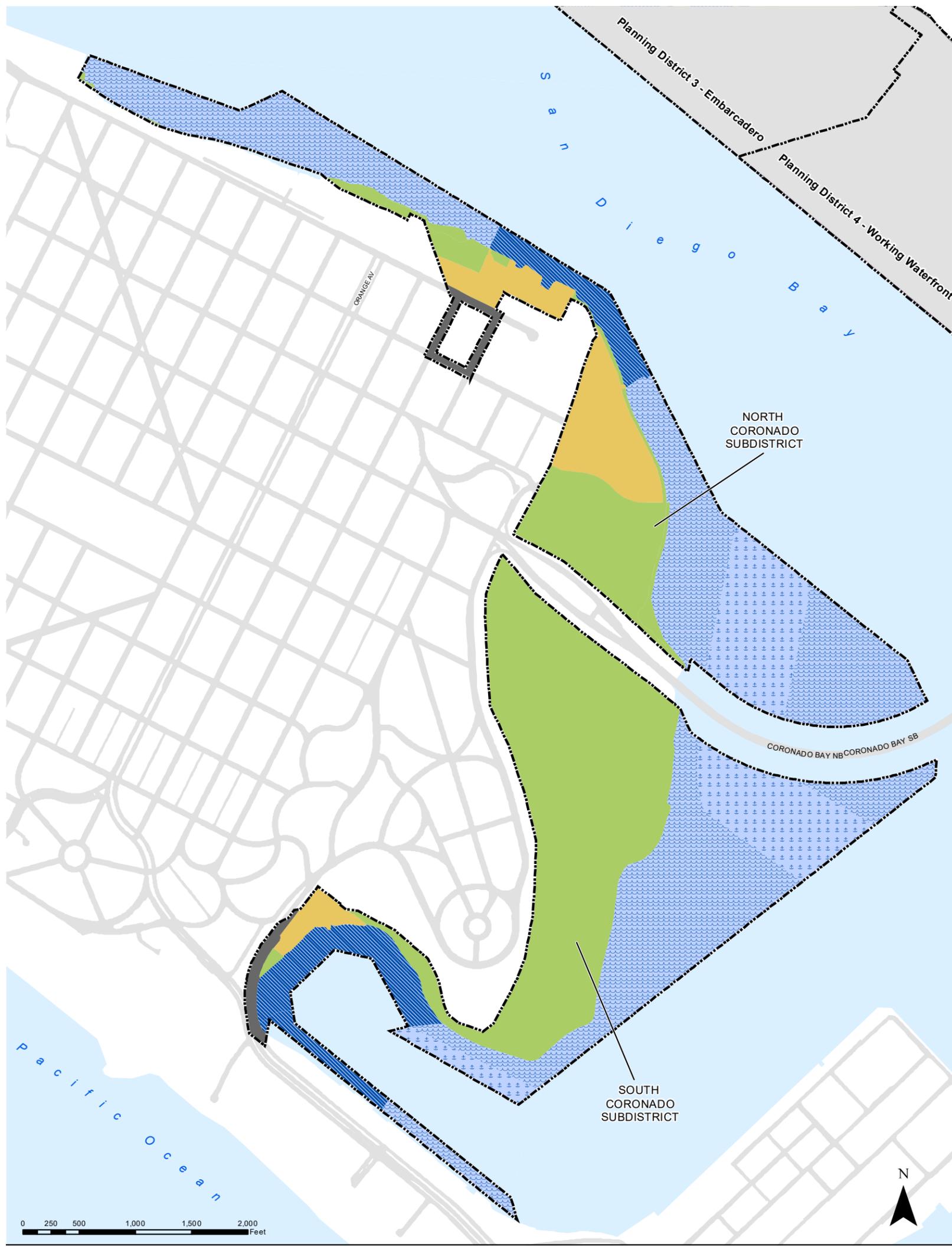
² Reduced acreage from redistribution to Recreational Berthing

³ Acreage from A-5 not previously accounted for Certified PMP

⁴ Certain water parcels had previously been assigned designations in the Certified PMP for informational purposes but were not a part of the District's coastal permitting authority. Pursuant to SB 507, those parcels have since been granted to the District from the California State Lands Commission. Thus, for consistency, parcels that had previously been assigned designations in the Certified PMP and have been granted to the District pursuant to SB 507 are proposed to be incorporated into the proposed PMPU area and within the District's coastal permitting authority. In PD10, this includes additional Open Bay/Water and Anchorage parcels in North Coronado and South Coronado.

⁵ A small portion of the Coronado Golf Course was recently granted to the District pursuant to SB 507 and proposed to be added to the District's coastal permitting authority through the proposed PMPU.

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JURISDICTIONAL BOUNDARIES

Planning Subdistricts

LAND USE DESIGNATIONS

- Commercial Recreation
- Institutional / Roadway
- Recreation Open Space

WATER USE DESIGNATIONS

- Anchorage
- Open Bay / Water
- Recreational Berthing

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Figure 3-12
PD10: Coronado Bayfront Water and Land Use Map
Port Master Plan Update

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North Coronado Subdistrict

The North Coronado Subdistrict includes the water and land area along the northern and northeastern shoreline of Coronado, extending from Naval Air Station North Island to the San Diego-Coronado Bridge (see Figure 3-12).

Vision

The proposed vision for this subdistrict is to maintain North Coronado's existing character and strong connections to the water through physical and visual coastal access and coastal-focused recreational activities. The District's vision includes preservation of the existing water mobility system and walkways to ensure coastal access. North Coronado is proposed to continue to provide visitors with the opportunity to explore Tidelands through low-intensity commercial amenities, open space recreation areas, pathways, and access to the Bayshore Bikeway.

Special Allowances

There are no special allowances proposed for this subdistrict.

Planned Improvements

Proposed landside access improvements would include development of a Local Gateway Mobility Hub, or larger hub, to support Tidelands uses near the Ferry Landing, including wayfinding and pathway connections to connect to the water-based transfer points and short-term public docking and be integrated with a surface-level or below-grade single parking facility, and maintaining continuous public coastal access to the Coronado Bayfront via the Bayshore Bikeway. Other landside access improvements include coordination with the adjacent jurisdiction on streetscape improvements for roadways within this subdistrict and providing marketing support and enhanced links between Tidelands and the adjacent jurisdiction for the operation of the City of Coronado's free summer shuttle.

Proposed coastal access improvements would involve modification or replacement in-kind of the existing water-based transfer points and short-term public docking at the Ferry Landing and at the existing pier east of Ferry Landing, and development of water-based transfer points at the existing pier facing northeast, and at the southern portion of Tidelands Park, near the beach north of the San Diego-Coronado Bridge, and development of one short-term public docking slip on the existing dock. Coastal access improvements would also involve modification or replacement in-kind of the moorings within A-4 and maintenance of existing hand-launched non-motorized watercraft launch points at the beach south of Ferry Landing and at Tidelands Park beach. Finally, proposed coastal access would include the provision of step-down areas to provide physical access to the water at the beach south of Ferry Landing and north or south of the Tidelands Park beach.

Proposed planned improvements associated with the visitor-serving commercial uses would include modification or replacement in-kind of existing retail and/or restaurant spaces and/or hotel rooms, as well as development of a new restaurant with up to 7,500 square feet in the southern portion of the Ferry Landing (as approved under the previously certified Port Master Plan in 1990). No increase in the number of existing hotel rooms is planned.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable project for the North Coronado subdistrict:

- Allow for modifications to moorings to allow for a cumulative increase of up to 20 moored vessels at existing Coronado Anchorage (A-4), provided the boundaries of the anchorage do not change, and there is no unmitigated increase in shading or fill.

Development Standards

Proposed public realm standards include provision of a continuous waterside promenade with a minimum width of 30 feet, which will be required of all development abutting the waterfront that is not a coastal-dependent maritime industrial use. The PMPU proposes the following scenic vistas for the North Coronado Subdistrict:

- View of downtown San Diego from the sandy beach located at the foot of D Avenue.
- View of downtown San Diego from Centennial Park at the foot of Orange Avenue.
- View of the working waterfront from Tidelands Park.

Proposed View Corridor Extensions are located at:

- Orange Avenue
- C Avenue
- B Avenue
- Second Street
- Third Street

Proposed parking standards include coordination between District occupants, tenants, and permittees to coordinate with the adjacent jurisdiction to collectively, or individually, establish an offsite parking strategy. Proposed building standards include a height limit of 40 feet and a setback 20 feet from the waterside promenade, as generally depicted on Figure PD10.5 of the proposed PMPU. The setback area shall include landscaping, public access, and bicycle and pedestrian facilities, such as bike racks, fixed or movable seating, and/or other possible improvements. Building orientation and character shall be context-sensitive in size, scale, and design, in character with the adjacent community, and should result in comprehensive, integrated development of commercial and public areas in a cohesive landscaped setting as well as building setback, orientation, and landscaping requirements. The PMPU proposes that buildings orient toward the waterfront along the Bay, include active uses on the ground floor adjacent to the waterfront, and provide a minimum landscaped area of 15 percent of the total site area separate from required parking spaces.

South Coronado Subdistrict

The South Coronado Subdistrict includes the water and land area south of the San Diego-Coronado Bridge, including Glorietta Bay and an approximately 0.60-mile-long stretch along Silver Strand Boulevard (see Figure 3-12).

Vision

The proposed vision for this subdistrict is to enhance South Coronado's connection to the water by increasing recreational boat berthing opportunities and promoting public access throughout the area. Proposed planned public improvements for this subdistrict are intended to increase connections to the water mobility system through new water-based transfer points and public docking opportunities.

Special Allowances

There are no special allowances proposed for this subdistrict.

Planned Improvements

Proposed planned improvements to landside access include the proposed maintenance of continuous public coastal access to the Coronado Bayfront via the Bayshore Bikeway. Other landside access improvements include coordination with the adjacent jurisdiction on streetscape improvements for roadways within this subdistrict and providing marketing support and enhanced links between Tidelands and the adjacent jurisdiction for the operation of the City of Coronado's free summer shuttle.

Proposed planned improvements to coastal access include modifying or replacing in-kind the existing water-based transfer point at the south side of Glorietta Bay and the existing short-term public docking at the Glorietta Bay Boat Launch, as well as modifying or replacing in-kind the existing recreational marina-related facilities and moorings within the Coronado Anchorage (A-4) and Glorietta Bay Anchorage (A-5), all subject to certain restrictions specified in the proposed PMPU.

In addition to the proposed planned improvements discussed above, there are also planned improvements that are considered appealable projects. These are described below.

Appealable Projects

The proposed PMPU plans for the following appealable projects for South Coronado subdistrict:

- Develop one additional short-term public docking slip within this subdistrict in association with recreational marina-related facilities in collaboration with the City of Coronado.
- Develop up to 55 additional recreational boat berthing vessel slips in association with existing recreational marina-related facilities in this subdistrict, in coordination and in partnership with the City of Coronado, to allow for the accommodation of various-sized vessels.
- Allow for modifications to moorings to allow for a cumulative increase of up to 20 moored vessels at existing Coronado Anchorage (A-4), provided the boundaries of the anchorage do not change, and there is no unmitigated increase in shading or fill.
- Allow for modifications to moorings, in coordination and in partnership with the City of Coronado, to allow for an increase of up to five moored vessels at existing Glorietta Bay Anchorage (A-5), provided the boundaries of the anchorage do not change, and there is no unmitigated increase in shading or fill.

Development Standards

Proposed public realm standards include maintenance of existing pathways to offer public coastal access through and along the Tidelands. The proposed PMPU notes that a waterside promenade is not required on the waterfront around Coronado Municipal Golf Course due to safety concerns. A waterside promenade is also not required on the waterfront around the Coronado Yacht Club, and a waterside promenade alternative alignment is encouraged in order to avoid operational and safety conflicts.

The PMPU proposes preservation of physical access to a scenic vista area overlooking Glorietta Bay from the Coronado Bay Promenade Park.

Proposed building standards include a height limit of 40 feet and calls for the orientation and character of buildings to be context-sensitive in size, scale, and design, in character with the adjacent community. The development standards propose comprehensive, integrated development of commercial and public areas in a cohesive landscaped setting as well as building setback, orientation, and landscaping requirements. Buildings are proposed to be oriented toward the waterfront along the Bay, and should include active uses on the ground floor adjacent to the waterfront and provide a minimum landscaped area of 15 percent of the total site area separate from required parking spaces.

3.5.4 Plan Implementation and Development Conformance

The proposed PMPU represents the District's long-range vision for future growth and development on Tidelands. Future issuance of Coastal Development Permits for development must conform to the proposed PMPU. Chapter 6, *Plan Implementation and Development Conformance*, of the PMPU describes how the Plan will be implemented and the requirements for determining conformance with the proposed PMPU. Both the plan implementation and development conformance sections described in this chapter are necessary to guide future development on Tidelands and successfully carry out the broad vision, goals, and objectives presented in the proposed PMPU. Chapter 6 also explains the parameters for interpretation and potential amendments of the PMPU, as well as the interplay between Chapter 3, *Elements*, Chapter 4, *Baywide Development Standards*, and Chapter 5, *Planning Districts*. Together, these chapters provide a road map for determining conformance with the proposed PMPU.

3.6 Intended Uses of the Program Environmental Impact Report

This section discusses the intended uses for this Draft PEIR and includes (1) a list of agencies that would be expected to use this PEIR for decision-making, and (2) a list of required permits and other approvals that would be required to implement the proposed PMPU. Environmental review and consultation requirements under Federal, State, or local laws, regulations, or policies that are in addition to CEQA are discussed in the applicable individual resource sections within Chapter 4, *Environmental Analysis*.

3.6.1 Agencies Expected to Use this Program Environmental Impact Report

The District is the CEQA lead agency, as defined in State CEQA Guidelines Sections 15050 and 15051, because it has principal responsibility for carrying out and approving the proposed PMPU. As the lead agency, the District also has primary responsibility for complying with CEQA. As such, the District has analyzed the environmental effects of the proposed PMPU, the results of which are presented in this Draft PEIR.

This PEIR is intended to be an informational document to be used by the Board, public agencies, stakeholder organizations and individuals, and the general public during the decision-making process for the proposed PMPU. In accordance with the State CEQA Guidelines and the District's *Guidelines for Compliance with CEQA*, this PEIR will inform readers of the potential significant environmental effects of the proposed PMPU, identify mitigation measures if feasible or project changes to lessen the proposed PMPU's significant effects, and describe a range of reasonable alternatives to the proposed PMPU. The Board will consider the PEIR, along with other substantial evidence in the administrative record, when making a decision whether to approve the proposed PMPU. The Board, in its role as the decision-making body of the District, is responsible for certifying the Final PEIR, approving the Mitigation Monitoring Reporting Program, and adopting Findings of Fact and Statement of Overriding Considerations pursuant to Sections 15090–15093 of the State CEQA Guidelines prior to approval of the proposed PMPU.

The CCC is a responsible agency, as defined in State CEQA Guidelines Section 15381, because it would have discretionary approval over the proposed PMPU. Similar to the District's current PMP, the CCC will decide whether to certify the proposed PMPU and will rely on the information and environmental determinations contained in this PEIR. No other responsible agencies have been identified for the proposed PMPU.

As defined in State CEQA Guidelines Section 15386, a trustee agency is a State agency that has jurisdiction by law over natural resources affected by a project that are held in trust for the people of the state of California. The California State Lands Commission (CSLC) is a trustee agency because it has jurisdiction and management control over those public trust lands of the State received by the State upon its admission to the United States in 1850. Historically, CSLC had jurisdiction over submerged lands within San Diego Bay that were not under the jurisdiction of the District. However, effective January 1, 2020, certain additional tidelands and submerged lands previously held by the CSLC within San Diego Bay were transferred to the District's jurisdiction per Senate Bill 507, which granted and conveyed in trust to the District all right, title, and interest of these additional tidelands and submerged lands. Certain granted parcels from SB 507 already within existing planning district boundaries are proposed to be incorporated into the proposed PMPU. However, the majority of these newly granted lands are not a part of the proposed PMPU and are not currently within the District's coastal permitting authority. In the future the additional tidelands and submerged lands will be incorporated into the District's Port Master Plan through a subsequent amendment (see Figure 3-13). The California Department of Fish and Wildlife (CDFW) is also a trustee agency with regard to: (1) the fish and wildlife of the State, (2) designated rare or endangered native plants, (3) game refuges, (4) ecological reserves, and (5) other areas administered by the CDFW. Both the CSLC and CDFW may have an interest in the proposed PMPU; however, neither CSLC nor CDFW would be required to issue approvals or permits for the proposed PMPU.

Table 3-14 provides a summary list of the approvals and permits that would be required.

Table 3-14. List of Required Discretionary Actions

Discretionary Action	San Diego Unified Port District	California Coastal Commission
Certification of Final PEIR	X	
Adoption of Mitigation Monitoring and Reporting Program	X	
Adoption of Findings of Fact	X	
Adoption of Statement of Overriding Considerations	X	
Approval and Adoption of the PMPU	X	
Certification of the PMPU		X

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Introduction

In accordance with Sections 15126 through 15151 of the California Environmental Quality Act (CEQA) Guidelines, Sections 4.1 through 4.15 of Chapter 4 of this Draft Program Environmental Impact Report (PEIR) contain discussions of the potential significant environmental effects resulting from implementation of the proposed Port Master Plan Update (PMPU), including information related to existing conditions, criteria for determining the significance of potential environmental impacts, analyses of the type and magnitude of direct, indirect, and cumulative environmental impacts, and feasible mitigation measures that would reduce or avoid significant environmental impacts.

Potential Environmental Impacts

This chapter provides an analysis of the following potential environmental impacts of the PMPU.

- 4.1 *Aesthetics and Visual Resources*
- 4.2 *Air Quality and Health Risk*
- 4.3 *Biological Resources*
- 4.4 *Cultural Resources and Tribal Cultural Resources*
- 4.5 *Geologic Hazards and Soils*
- 4.6 *Greenhouse Gas Emissions and Energy*
- 4.7 *Hazards and Hazardous Materials*
- 4.8 *Hydrology and Water Quality*
- 4.9 *Land Use and Planning*
- 4.10 *Noise and Vibration*
- 4.11 *Population and Housing*
- 4.12 *Public Services and Recreation*
- 4.13 *Sea Level Rise*
- 4.14 *Transportation, Circulation, and Mobility*
- 4.15 *Utilities and Service Systems*

The San Diego Unified Port District (District) determined during preparation of the project's Initial Study/Environmental Checklist (see Appendix A) that the proposed PMPU would have either a less-than-significant impact or no impact associated with the following resources: Agriculture and Forestry Resources, Mineral Resources, and Wildfire. These issues are described in Chapter 5, Section 5.4, *Effects Found Not to Be Significant*, of this Draft PEIR.

Format of the Environmental Analysis

Each of the 15 environmental resource sections of this chapter includes the following subsections.

Overview

This subsection briefly describes the thresholds of significance considered in the particular resource section, identifies any reports that contain information presented in the environmental analysis, and summarizes the environmental effects of the proposed PMPU and any necessary mitigation measures.

Existing Conditions

According to Section 15125 of the State CEQA Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of a project to provide the “baseline condition” against which project-related impacts are compared. Normally, the baseline condition is the physical conditions that exist at the time the Notice of Preparation (NOP) is published; however, a different baseline may be used in specific cases where it is deemed appropriate and supported by substantial evidence. The NOP for the proposed project was published on March 30, 2017. Unless indicated otherwise, the environmental setting described in each of the resource sections will be that which existed at the time the NOP was published.

Laws, Regulations, Plans, and Policies

This subsection provides a summary of laws, regulations, plans, and policies at the Federal, State, and local levels that are relevant to the PMPU as they relate to the particular environmental resource area in discussion. Compliance with these laws and regulations is typically mandatory unless noted otherwise within the analysis. Therefore, as it relates to the *Project Impact Analysis* below, compliance is assumed for existing mandatory regulations because they are required by law.

Project Impact Analysis

This subsection describes the methodology used for the analysis of the potential environmental impacts of the PMPU; identifies the criteria for determining the significance of potential impacts; discusses the facts, data, and other information that relates to potential environmental impacts; determines whether the environmental impacts would be significant; identifies feasible mitigation measures that may avoid or reduce the significant impacts; and states a conclusion as to whether the environmental impacts would be considered significant and unavoidable, less than significant with mitigation incorporated, or less than significant (see definitions below). Each topic analyzed is divided into specific issues, based on potential impacts, and addresses construction and operation impacts separately wherever relevant. The discussion of potential impacts is based on the applicable threshold of significance (see below) for each issue. Where potential impacts are significant, feasible mitigation measures are identified to minimize, rectify, reduce, eliminate, or compensate for significant impacts with the goal of reaching a less-than-significant impact determination.

Methodology

Each methodology subsection describes the means used to analyze potential impacts on a particular resource, discussing the steps followed and listing any studies relied on to determine significance.

Thresholds of Significance

Thresholds of significance are criteria used to assess whether potential environmental effects are significant. The significance criteria used in this analysis are primarily based on the recommendations provided in Appendix G of the State CEQA Guidelines. The thresholds of significance define the type, amount, and/or extent of impact that would be considered a significant adverse change in the environment. The thresholds of significance for some environmental topics, such as certain air quality and noise issues, are quantitative, while thresholds for other topics, such as visual quality, are often qualitative. The thresholds of significance are intended to assist the reader in understanding how an impact is determined to be significant and are based on substantial evidence in the administrative record.

Project Impacts and Mitigation Measures

Impact Analysis

The analysis of environmental impacts considers both the construction and operation of future development under the proposed PMPU. As required by Section 15126.2(a) of the State CEQA Guidelines, direct, indirect, short-term, long-term, onsite, and/or offsite impacts are addressed, as appropriate, for the environmental issue being analyzed. This Draft PEIR utilizes the following terms to describe the level of significance of impacts identified during the course of the environmental analysis.

No Impact: This term is used when the PMPU's construction and/or operation would have no adverse effect on a resource.

Less than Significant: This term is used to refer to impacts resulting from implementation of the proposed PMPU that would not exceed the defined thresholds of significance, and potentially significant impacts that are reduced to a level that does not exceed the defined thresholds of significance after implementation of mitigation measures. In the latter case, the determination is commonly stated as "less than significant with mitigation incorporated."

Significant: This term is often used to refer to impacts resulting from implementation of the proposed PMPU that exceed the defined thresholds of significance before identification of any mitigation measures. A "significant effect" is defined by Section 15382 of the State CEQA Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment [but] may be considered in determining whether the physical change is significant." For impacts that exceed a threshold of significance, mitigation measures that avoid or reduce the potential significant impact are identified, which may cause the impact to be reclassified as less than significant if it is sufficiently reduced, or the impact may remain significant, in which case it is referred to as a significant and unavoidable impact (or unavoidable significant impact).

Significant and Unavoidable: This term is used to refer to significant impacts resulting from implementation of the proposed PMPU that cannot be eliminated or reduced to below a threshold of significance through implementation of feasible mitigation measures.

Mitigation Measures

Section 15126.4 of the State CEQA Guidelines requires an EIR to “describe feasible measures which could minimize significant adverse impacts.” As defined in State CEQA Guidelines Section 15364, “‘feasible’ means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.” Mitigation is only required when a significant impact has been identified, and any mitigation requires an essential nexus and must be roughly proportional to the magnitude of a project’s impacts (State CEQA Guidelines Section 15126.4(a)). Mitigation includes avoiding an impact altogether, minimizing impacts, rectifying impacts, reducing or eliminating impacts over time, or compensating for impacts by replacing or providing substitute resources. This subsection lists the mitigation measures that could reduce the severity of impacts identified in the *Impact Analysis*. Mitigation measures are the specific environmental requirements for construction or operation of future development under the PMPU that will be included in the Mitigation Monitoring and Reporting Program and adopted as conditions of approval of the proposed PMPU.

Cumulative Impact Analysis

The cumulative impact analysis contained in each of the resource sections in this chapter evaluates potential significant cumulative impacts resulting from the PMPU in combination with projected regional growth. These growth projections serve as the foundation for regional planning documents such as water supply management plans and general plans, and provide the basis for determining housing, infrastructure, and transportation needs across the San Diego region. The cumulative impact analysis relies on the Series 14: 2050 Regional Growth Forecast, which addresses projected growth from 2030 to 2050, as well as any regionally significant plans and programs that were adopted or are currently in the planning phase and were not accounted for in the Series 14 Growth Forecast. The past, present, and reasonably foreseeable future plans and programs considered in the cumulative impact analysis are listed and described in Chapter 2, *Environmental Setting*.

The cumulative impact analysis considers two separate impacts: the significance of the cumulative effect from projected regional growth and regionally significant plans and programs and, in the event a cumulative effect is identified, the PMPU’s incremental contribution to the identified cumulative effect. If it is determined that the PMPU’s contribution to the cumulative effect is considerable, a cumulatively significant impact is identified, and feasible mitigation is imposed.

Section 4.1

Aesthetics and Visual Resources

4.1.1 Overview

This section describes the existing aesthetic and visual conditions that could be adversely affected by the proposed Port Master Plan Update (PMPU), discusses the laws and regulations related to aesthetics and visual resources, and analyzes the PMPU’s potential effect on (1) designated scenic views, (2) scenic resources from a designated highway, (3) the existing visual character of the site and its surroundings, and (4) day and nighttime views affected by introducing light or glare. Visual concepts and terminology are presented below.

Table 4.1-1 summarizes the significant impacts and mitigation measures (MMs) discussed in Section 4.1.4.5, *Project Impacts and Mitigation Measures*.

Table 4.1-1. Summary of Significant Aesthetics and Visual Resources Impacts and Mitigation Measures

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-AES-1: Potential to Interfere with Designated Scenic Vista Areas or View Corridors During Construction Associated with Implementation of the Proposed PMPU	PD1, PD2, PD3, PD4, PD8, PD9, PD10	MM-AES-1: Plan Construction Schedule and Storage/Staging to Avoid Scenic Vista Areas and View Corridor Extensions.	Significant and Unavoidable	Implementation of MM-AES-1 would reduce impacts by requiring review of the future project proponent’s construction schedule and staging location to avoid blocking scenic vista areas and view corridor extensions. Because the type, duration, and location of construction equipment is unknown, Impact-AES-1 would remain significant and unavoidable.
Impact-AES-2: Potential to Result in Substantial Degradation of	PD1, PD2, PD3, PD4, PD8, PD9, PD10	MM-AES-2: Install Construction Fencing	Significant and Unavoidable	Implementation of MM-AES-2 would minimize the visibility of construction

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Visual Character and Quality During Construction Associated with Implementation of the Proposed PMPU				activities at a project site. However, because the location, duration, and scale of future development is not yet known, Impact-AES-2 would remain significant and unavoidable.
Impact-AES-3: New Permanent Source of Glare Generated by Potential High-Rise Development	PD2, PD3	MM-AES-3: Incorporate the Use of Reduced Glare Building Materials	Less than Significant	Implementation of MM-AES-3 would require the project proponent of any future high-rise hotel towers to use non-reflective materials that would reduce the potential sources of glare on the building. MM-AES-3 would be reduced to less than significant.
Impact-C-AES-1: Potential to Result in Cumulatively Considerable Adverse Impacts on Scenic Vista Areas or View Corridors During Construction	PD1, PD2, PD3, PD4, PD8, PD9, PD10	MM-AES-1, as described above	Cumulatively Significant and Unavoidable	Implementation of MM-AES-1 would reduce impacts by requiring review of the future project proponent's construction schedule and staging location to avoid blocking scenic vista areas and view corridor extensions. Because the type, duration and location of construction equipment is unknown, Impact-C-AES-1 would remain significant and unavoidable.

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-C-AES-2: Potential to Result in Cumulatively Considerable Substantial Degradation of Visual Character and Quality During Construction	PD1, PD2, PD3, PD4, PD8, PD9, PD10	MM-AES-2 , as described above	Cumulatively Considerable and Unavoidable	Implementation of MM-AES-2 would minimize the visibility of construction activities at a project site. However, because the location, duration and scale of future development is not yet known, Impact-AES-2 would remain cumulatively significant and unavoidable.
Impact-C-AES-3: Potential to Result in a Cumulatively Considerable New Permanent Source of Glare Generated by Potential High-Rise Development	PD2, PD3	MM-AES-3 , as described above	Less than Significant	MM-AES-3 would require the use of low-reflectivity glass and would limit the area of a high-rise building that could contain glazed surfaces. Therefore, this would reduce impacts related to glare to less than significant.

4.1.1.1 Concepts and Terminology

Key concepts and terminology used to describe existing aesthetic and visual resource conditions or to describe the change in existing conditions after implementation of the proposed PMPU are provided below. Although there may be more than one definition for any of the terms below, these common definitions are used for analytical consistency.

Views refer to visual access and obstruction, or whether it is possible to see a focal point or panoramic scene from an area. Views may be discussed in terms of *foreground*, *middleground*, and *background*. Foreground views are those immediately presented to the viewer and include objects at close range that may tend to dominate the view. Middleground views occupy the center of the viewshed and tend to include objects that are the center of attention if they are sufficiently large or visibly different from adjacent visual features. Background views include distant objects and other objects that make up the horizon. Objects in the background eventually fade to obscurity with increasing distance. In the context of background, the skyline or the ocean can be an important visual feature because objects above this point are highlighted against the background of the sky or

water. These “skylined” elements are typically more evident to the viewer because of their inherent contrast.

Visual and scenic resources. Although the perception of what is considered scenic may vary according to the environmental setting, visual/scenic resources are generally defined as those areas in the public viewshed that provide substantial scenic value. Scenic resources may include unique mature trees or other unique landscape or structures that provide a unique component of the visual experience of the place. For example, the San Diego Bay is considered a scenic resource within the proposed PMPU area.

Visual character. The visual context of an area includes the features of its landforms, vegetation, water surfaces, and cultural modifications (physical changes caused by human activities) that give the landscape its visually aesthetic qualities. Landscape features, natural appearing or otherwise, form the overall impression of an area. This impression is referred to as *visual character*. Visual character is studied as a point of reference to assess whether a given project would appear compatible with the established features of the setting or would contrast noticeably and unfavorably with them.

The following additional definitions pertain to terminology used in visual analysis.

- *Viewer sensitivity*, or viewer concern about noticeable changes to views, is based on the visibility of a scenic resource, proximity of viewers to the resource, relative elevation of viewers to the resource, frequency and duration of views, number of viewers, and types and expectations of the viewers. Visual sensitivity is typically used to assess changes to visual character. Generally, visual sensitivity increases as the total number of viewers, frequency, and duration of viewing activities increases. The degree of visual sensitivity is treated as occurring at one of the following four levels.
 - *High sensitivity* suggests that the majority of the public is likely to react strongly to an adverse change to visual character. A highly concerned public is assumed to be more aware of any given level of adverse change and is substantially less tolerant than a public that has little to moderate concern.
 - *Moderate sensitivity* suggests that the public would probably voice concern over substantial adverse changes in visual character. Often, the affected views are secondary in importance or are similar to others commonly available to the public.
 - *Low sensitivity* is considered to prevail where the public is expected generally to have little concern about adverse changes in the landscape, or only a small minority may be expected to voice such concern, even where the adverse change is substantial in intensity and duration.
 - *No sensitivity* occurs when the views are not public, or there are no indications of public concern over, or interest in, scenic/visual character on the affected area.
- *Viewshed* is all of the surface area visible from a particular location or sequence of locations (e.g., roadway or trail).
- *Scenic vista areas* (or *vista areas*) are publicly accessible viewpoints that provide an expansive/panoramic view of a large geographic area. Furthermore, panoramic views provide visual access to a large geographic area for which the field of view can extend into the distance,

and are normally identified by an elevated viewing position in comparison to their surroundings.¹

- *View corridor extensions* preserve view corridors that begin at the San Diego Unified Port District's (District's) boundary farthest from the waterfront or the nearest terminus of an existing public right-of-way that is on Tidelands, and end at the waterfront or the end of a pier or land mass that extends over the water.
- *Principle public view groups* are the groups of people that would be present in the vicinity of the public views of designated scenic vista areas, view corridor extensions, or designated scenic highways that would experience a particular view. The principal public viewer groups for views in the proposed PMPU are motorists and pedestrians within public roadways and rights-of-way and Downtown/bayfront tourists and recreationists, such as promenade and park users and boaters in the Bay.

4.1.2 Existing Conditions

The proposed PMPU area comprises the majority of the District's jurisdiction, including approximately 1,009 acres of land and 1,454 acres of water in and around the Bay and along the Imperial Beach oceanfront.² While the waters of the Bay are calm due to the enclosed and protected nature of the Bay, it is a busy waterway with a high level of activity associated with commercial, maritime, and recreational boating activities. In addition, the majority of the proposed PMPU area falls within or adjacent to developed and highly urbanized areas within the city of San Diego (such as Downtown San Diego) and the cities of Coronado and Imperial Beach. Scenic resources within the proposed PMPU area generally consist of the waters within the Bay, or, within the Imperial Beach area, the ocean. In general, views of watercraft, ranging from small recreational craft to large vessels, such as container and general cargo vessels as well as U.S. naval vessels, are present primarily within foreground and middleground views, while the San Diego-Coronado Bay Bridge and views of the developed and urbanized shorelines of Coronado, the Point Loma peninsula, or Downtown San Diego comprise background views (depending on the perspective). Along the Imperial Beach oceanfront, views include the Pacific Ocean, consisting of open ocean and the beach. Along the oceanfront, views of watercraft, such as those seen in the Bay, are also present; however, they are generally farther out and part of the background views. Views of landside areas of the proposed PMPU area largely include developed, urbanized waterfronts with a variety of uses, including parks, restaurants, hotels, office uses, maritime museums, shipping terminals, and ancillary uses for water-dependent uses (offices for marinas, shipbuilding facilities, boat repair facilities, etc.). Landside areas also include wildlife preserves in the south Bay. The visual character of each planning district (PD) is detailed below.

¹ The existing Port Master Plan (PMP) refers to these areas as *vista areas* whereas the PMPU uses the term *scenic vista areas*. While the two documents use slightly different terminology, they are essentially describing the same resource. See the discussion in Section 4.1.4.4, *Proposed Scenic Vistas*, for a description of existing versus proposed scenic vista areas.

² As explained in Chapter 3, *Project Description*, these acreages exclude PD5, PD6, Pond 20 (in PD7), and the San Diego International Airport.

4.1.2.1 Scenic Highways and Scenic Resources

Scenic highways are highways, or segments of highways, that have been designated by the State as containing views of outstanding scenic quality, striking views, flora, geology, or other unique natural attributes (Caltrans 2008). The only State-designated scenic highway within the vicinity of the planning area is a 9-mile segment of State Route (SR)-75 as it crosses the San Diego–Coronado Bay Bridge and continues through Coronado and down the Silver Strand, terminating at the city limits of Imperial Beach (the segment of SR-75 that travels through Coronado and connects the bridge and the Silver Strand is an eligible state scenic highway but is not officially designated as such) (Caltrans 2019).

Specifically, from the 200-foot tall SR-75/San Diego-Coronado Bay Bridge views of the San Diego Bay are expansive in all directions. The Coronado Bayfront (PD10) features in foreground views to the north as do views of the Working Waterfront (PD4) to the north and south. Given the prominence of the buildings of Downtown San Diego that are within and adjacent to the Embarcadero (PD3), views of this planning district are also prominent within the viewshed of the SR-75/San Diego-Coronado Bay Bridge. Views of the remaining planning districts are largely obscured by distance. Scenic resources within the viewshed of this designated scenic highway include the Bay and the skyline of Downtown San Diego. It should be noted, however, that the bridge is only open to motor vehicles, there are no pullouts for viewing, and stopping on the bridge is prohibited by law. Also, the bridge has a speed limit of 50 miles per hour and a concrete guardrail that limits the view in lower profile vehicles.

Scenic resources visible from the Silver Strand segment of SR-75/Silver Strand Boulevard include foreground views of narrow strips of sandy waterfront areas, middleground views of the open waters of the Bay, and background views of the Downtown San Diego skyline; as well as wide sandy beaches in foreground views to the west, with glimpses of the Pacific Ocean stretching to the horizon in the background. Cranes and vessels of the Tenth Avenue Marine Terminal (TAMT) are also visible to the east.

4.1.2.2 Designated Public Views

As noted above, the existing PMP designates vista areas that are defined as, “points of natural visual beauty, photo vantage points, and other panoramas.” Vista areas have been designated in all existing planning districts with the exception of PD4. Vista areas for each planning district are discussed in Section 4.1.2.4 through Section 4.1.2.11, below.

4.1.2.3 Light and Glare

There are two typical types of light intrusion in the proposed PMPU area. First, light emanates from the interior of structures and passes out through windows. Second, light projects from exterior sources, such as street, security, and landscape lighting, as well as flood lighting for overnight offloading work at the marine terminals and nighttime work at the shipyards in PD4. *Light spillover* is typically defined as the presence of unwanted or misdirected light on properties adjacent to the property being illuminated. Light spillover can be a nuisance to adjacent areas and can diminish views of the clear night sky. Throughout and adjacent to the proposed PMPU area, sources of light generally include commercial and residential—ranging from high-rise office buildings, hotels, and residential towers to single-story, single-family homes and small shops. Industrial development also

contributes to nighttime lighting in the proposed PMPU area, specifically TAMT. Throughout the proposed PMPU area, street lighting is a significant source of nighttime lighting as well, as are transitory sources such as headlights from vehicles. Waterside lighting sources include the boats, cruise ships, and shipping vessels that use the Bay.

Glare is described as the distraction, discomfort, or impairment of vision caused by extreme contrasts in the field of vision, where light sources such as sunlight, lamps, luminaries, or reflecting surfaces are excessively bright in relation to the general brightness of surroundings. Glare also results from sunlight reflecting off flat building surfaces, with glass typically contributing the highest degree of reflectivity. A primary source of existing daytime glare within the proposed PMPU area is sunlight reflecting off the open waters of the Bay and Pacific Ocean. Glare from horizontal water surfaces is most prevalent in the early and late portions of the day when reflected sunlight is most likely to affect viewers. Another scattered source of daytime glare is sunlight reflecting off windows of vehicles in parking lots and traveling the streets, or boats docked at the marina, which produces minor amounts of glare.

4.1.2.4 Planning District 1: Shelter Island

Visual Character and Quality

The Shelter Island Planning District (PD1) is located adjacent to the Point Loma community of San Diego and comprises the land and water area roughly between Nimitz Boulevard on the northeast and Kellogg Street on the southwest. Overall, PD1 contains low-profile development, i.e., hotels and restaurants, that do not exceed two to three stories.

In addition, two harbors exist within Shelter Island—the America’s Cup Harbor, which is located within the eastern area of the planning district, and the Shelter Island Yacht Basin, which is the larger of the two harbors and is located within the western portion of PD1. Collectively, these two harbors contain approximately 13 marinas/yacht clubs with hundreds of boat slips that accommodate sailboats, yachts, and fishing boats. From a visual perspective, middleground and background views of marinas generally consist of a high concentration of regularly spaced (and often white) boats topped by a dense collection of masts. In closer foreground views, individual features of the boats are evident, and the regular spacing of the boats is not distinguishable. The collection of masts, however, still forms a prominent visual component. The high concentration of masts may obscure but generally does not completely block views through and beyond the marinas.

West Shelter Island

The visual character of the southern side of West Shelter Island is largely defined by the visitor-serving uses that occupy the area. Development consists primarily of low-rise (i.e., no more than three stories) but expansive hotels and yacht clubs and one- or two-story restaurants and retail stores that are separated from each other and/or the roadway by large surface parking lots. The buildings are contemporary in style. Many include beige or yellow stucco siding, while others have elements reminiscent of island or “tiki” architectural styles, such as the use of dark woods, shutters, and/or steeply pitched and extended porch roofs.

A waterfront park, consisting primarily of wide green lawns, and narrow surface parking lots, occupies the majority of the shoreline. Although the open green lawns are the most visually prominent component of the park, other visual elements include trees, public art (statues), play equipment,

walking paths, picnic tables, a fishing pier, and the Shelter Island Boat Launch. Four quasi-private/quasi-public piers associated with residential properties are located adjacent to the La Playa Trail in the northwestern portion of PD1.

West Shelter Island includes panoramic views of the San Diego Bay, which are available along the entire length of the publicly accessible southern waterfront. From the northern portion of West Shelter Island, views are available from the public walkways that border the shoreline, including La Playa Trail, which runs along the northern shore of the Shelter Island Yacht Basin. Views consist of the many marinas and comprise the somewhat cluttered appearance of a large collection of boats of varying shapes and sizes topped by a dense collection of sailboat masts. In addition, from the southernmost portion of the subdistrict, background views of the Bay and San Diego International Airport (SDIA) are available.

Overall, the visual quality of West Shelter Island is considered to be moderate. While the visual context as a whole is relatively unified, there are no particularly distinctive visual elements within the subdistrict itself. Nevertheless, because the subdistrict draws a high number of visitors, provides ample public access space, and is located on the Bay, and contains the La Playa Trail, viewer sensitivity in this area would be considered high.

East Shelter Island

East Shelter Island contains mostly visitor-serving commercial uses, such as restaurants and souvenir shops, and marina-related uses, such as yacht sales, boat supply shops, boat repair services, support facilities for sportfishing operations, and boat tour kiosks. In addition, East Shelter Island is home to one of two commercial fishing facilities in San Diego Bay.

The development pattern in this area is erratic. While buildings typically do not exceed two stories, there is no dominant architectural style; and building size, massing, and lot orientation vary from one lot to another. Most buildings are small, stand-alone single-story box-shaped structures with no evident architectural style, sporadically spaced along the waterfront and separated by large surface parking lots. Some architectural elements are repeated in the architecture of the northern portion of the area, including the use of hipped roofs and/or corrugated roofing materials.

Similar to West Shelter Island, expansive views of the Bay are available in East Shelter Island from public walkways, with offshore anchorages in the foreground, open navigation channels with vessels passing in the middleground, and the Downtown San Diego skyline in the background. Again, from the northern side of the subdistrict, views from the public walkways are obstructed by the many vessels that are docked at the marinas within the America's Cup Harbor.

Overall, the visual quality of East Shelter Island is moderate to low. The visual context is not unified and there are no particularly distinctive visual elements within the subdistrict. Likewise, viewer sensitivity within this subdistrict would be moderate to low as well along the landside portion of the subdistrict except within the southeastern area, adjacent to the roundabout, where viewer sensitivity would be considered high.

Scenic Vistas

West Shelter Island

The existing PMP identifies seven scenic vistas within Shelter Island, five of which are within the West Shelter Island Subdistrict. Two are designated along the southern bayfront—one at the southwestern corner of the island, oriented toward the southwest out toward the Bay. Expansive views of the Bay are available within this scenic vista, including views of Naval Air Station (NAS) North Island, Coronado, and the channel between Point Loma and Coronado that leads to the ocean all the way down to the skyline of Downtown San Diego. Open water of the Bay dominates foreground and middleground views, with background views comprising the military vessels, warehouses, etc. of North Island, and the high-rise buildings of Downtown San Diego. The second scenic vista is located roughly at the midpoint of the West Shelter Island Subdistrict along Shelter Island Drive, in front of the Best Western Island Palms Hotel. Similar to the first scenic vista, views from this area include expansive views of the Bay stretching from the Point Loma peninsula to the Downtown San Diego skyline.

The other three scenic vistas identified within West Shelter Island are along the northern shore of the Shelter Island Yacht Basin on the mainland side of Shelter Island. The first is near the southwest corner of the intersection of Anchorage Lane and Shelter Island Drive and is oriented in a southwesterly direction. Views from this vista comprise foreground views of a dense concentration of sailboats and masts. Middleground and background views from this vantage point are largely obstructed by the concentration of docked vessels. The second designated scenic vista is near the southwest corner of the intersection of Anchorage Lane and Talbot Street and, again, is oriented toward the southwest. Foreground and middleground views comprise a dense concentration of sailboats and masts that are docked at the adjacent marinas. Background views comprise the Point Loma peninsula. Finally, the third scenic vista in this area is at the bayfront terminus of Kellogg Street and is oriented in a southeasterly direction, looking into the Shelter Island Yacht Basin. Foreground views from this vista point include the open water of the Shelter Island Yacht Basin, middleground views include the eastern side of the West Shelter Island Subdistrict, and background views include the open waters of the Bay beyond.

East Shelter Island

There are two designated scenic vistas within East Shelter Island. The first is at the easternmost extension of Shelter Island Drive in the circular drive that provides access to the Bali Hai restaurant. This vista is oriented toward the northeast and includes foreground views of an offshore small-vessel anchorage, middleground views of the open waters of the Bay, and background views of Harbor Island and Downtown San Diego, including the high-rise buildings that comprise the skyline. The second vista is along the northernmost shore of the East Shelter Island subdistrict and is oriented southwesterly, looking into the America's Cup Harbor. Foreground and middleground views consist of the several marinas that are located within the harbor and the varying shapes and sizes and dense concentration of masts of the vessels that are docked at these marinas. Background views include the higher elevations of the Point Loma peninsula.

Light and Glare

West Shelter Island

Lighting sources along West Shelter Island include security lighting along the waterfront promenade, lighting along Shelter Island Drive, lighting in the parking lots of the hotels and restaurants, and security and operational lighting for the hotels and their marinas. Cars and boats also contribute to ambient lighting conditions in this area. The northern shore of West Shelter Island is predominantly single- and multi-family residential with some commercial uses in the northern end. Sources of light within West Shelter Island include lighting for streets and parking lots, signage and operational lighting at the commercial buildings, lighting along the piers and walkways for the marinas, and safety and security lighting for the residential buildings and single-family residences. Because there are older structures in this subdistrict, there may be unshielded outdoor lighting that could contribute to light spillage in the area. Cars and boats are another source of lighting in the area. There are not many nighttime activities (such as commercial or nighttime recreational activities) that require substantial amounts of lighting in this subdistrict, thus lighting is concentrated near walkways and entrances. Therefore, the overall nighttime lighting environment is considered low to moderate.

Sources of glare include the sunlight reflecting off the waters of the Shelter Island Yacht Basin and the Bay, as well as sunlight reflecting off of cars and boats. The overall glare environment is considered moderate to low due to the lack of buildings with reflective architectural finishes.

East Shelter Island

East Shelter Island consists mostly of commercial uses. Lighting sources include parking lot lighting, street lighting, and interior and exterior lighting of the buildings that house restaurants and various shops. The overall nighttime lighting environment is considered low to moderate because the area does not require substantial amounts of night lighting.

Sources of glare include the sunlight reflecting off the waters of the America's Cup Harbor and the Bay, as well as sunlight reflecting off of cars and boats. The overall glare environment is considered moderate to low due to the lack of buildings with reflective architectural finishes.

4.1.2.5 Planning District 2: Harbor Island

The Harbor Island Planning District (PD2) includes the water and land area between the North Harbor Drive bridge that crosses to Liberty Station in the north and United States Coast Guard facility in the south. This planning district also includes a portion of the corridor along Pacific Highway. Although SDIA is within the Tidelands, jurisdiction for this facility falls under the San Diego County Regional Airport Authority and is not a part of the proposed PMPU area. The shape and visual features of Harbor Island are similar to those of Shelter Island, consisting of three main segments, including a narrow strip of waterfront area along the mainland along North Harbor Drive, an approximately 1.5-mile long island, and an approximately 0.30-mile entrance segment over which Harbor Island Drive travels and connecting to two portions of Harbor Island. The planning district includes the two inlets between the land and island portions of Harbor Island, which are named Harbor Island East Basin and Harbor Island West Basin. For planning purposes, Harbor Island is divided into four subdistricts:

- West Harbor Island, which includes the area west of Harbor Island Drive not within the Spanish Landing subdistrict.
- Spanish Landing, which includes a narrow area of land within the northern portion of the planning district adjacent to North Harbor Drive and a narrow portion of the northern side of the West Basin.
- East Harbor Island, which includes the mainland and island portions of Harbor Island that are east of Harbor Island Drive.
- Pacific Highway Corridor, which includes a segment of land adjacent to Pacific Highway, roughly between Vine Street and Laurel Street, to the northeast of SDIA.

The visual character and quality, scenic vistas, and sources of light and glare of these four subdistricts are discussed below.

Visual Character and Quality

West Harbor Island

West Harbor Island is dominated by visitor-serving uses. Overall, development within West Harbor Island is somewhat sparse and buildings are separated by large parking lots, which tend to be shielded from drivers on Harbor Island Drive or users of the waterfront walkway by landscaping, mostly palm or other ornamental trees, that lines Harbor Island Drive. The most prominent structures within West Harbor Island are three hotels, each about ten stories tall. Other uses, primarily restaurants and marina boathouses, are generally one or two stories. The buildings tend to be of contemporary design and materials, and there is no dominant or unifying architectural style to the various structures. However, most of the buildings utilize beige or white stucco or concrete siding and red tiled roofs.

The waterfront public walkway, bordered mostly by narrow strips of green lawn and the roadway, consists of a narrow concrete sidewalk that runs the entire length of the Harbor Island Planning District along the Bay, and there is a larger bayside park midway down the island's western side. The most notable views available to viewers from Harbor Island are of the Bay, including expansive views from along the entire length of the southern waterfront walkway.

There are four marinas containing hundreds of slips in the West Basin, creating visual elements similar to those described above for Shelter Island (i.e., a dense concentration of small- to medium-sized vessels and their masts).

The visual quality of West Harbor Island is generally considered moderate. The overall landscape is unified in appearance, but the architecture of the most prominent buildings (i.e., the hotels) is not distinctive, and the public parks also lack any unique visual elements. However, because the subdistrict receives a high number of visitors, is highly accessible to the public, and is located adjacent to the Bay, viewer sensitivity is considered high.

Spanish Landing

Spanish Landing includes the Spanish Landing Park, which is a narrow linear park that fronts the West Basin. The park includes a waterside promenade, picnic areas, play areas, public art, the Callaway Carillon bell tower, and a small beach. The park largely consists of pockets of green lawn

separated by parking lots and a narrow internal roadway. Shade trees are spaced regularly along the promenade and next to the parking lots and North Harbor Drive. Built structures include two small restroom buildings made of light brown bricks and red tiled roofs. This subdistrict also includes the open water area within the northern portion of the West Basin. Views available from Spanish Landing Park include the marinas and hotels within and adjacent to the Harbor Island West Basin. While views of the basin are not expansive, viewers would expect and appreciate the presence of the marinas within these views. Given the dense concentration of sailboat masts and the tall hotel buildings within Harbor Island West, views of the Bay are not available from Spanish Landing Park

The visual quality of Spanish Landing is generally considered moderate. The overall landscape is unified in appearance, but the park lacks any unique visual elements. However, because the subdistrict receives a high number of visitors, is highly accessible to the public, and is located adjacent to the Bay, viewer sensitivity is considered high.

East Harbor Island

In contrast to the visitor-serving uses that dominate West Harbor Island, much of East Harbor Island has a more industrial character and is largely dominated by the parking lots used by the former car rental lots, which occupy the northern landward side of East Harbor Island, north of the Harbor Island East Basin. Expansive surface parking lots are dotted by small single-story warehouse buildings, out of which the car rental operations were managed. The Harbor Police Department administrative building and storage lot is also located in this area. The promenade that begins in Spanish Landing Park continues through this side of the island; however, it is situated north of the car rental area, adjacent to North Harbor Drive, and is not directly adjacent to the Bay.

The southern portion of East Harbor Island, south of the Harbor Island East Basin, is similarly occupied by parking lots, and visually the island side of East Harbor Island is dominated by large expanses of gray concrete—both from the parking lots and from the wide roadway of Harbor Island Drive, interrupted by some vegetation within the medians between the parking lots and the roadway, and the narrow strip of green lawn that separates Harbor Island Drive from the waterfront walkway that extends the entire length of Harbor Island. However, the south side of East Harbor Island does include some stand-alone commercial and recreational uses, including the Sunroad Resort Marina, and two restaurants at the eastern tip of the subdistrict: Coasterra and Island Prime & C Level. These three buildings are relatively small, comprising single-story, contemporary structures. From East Harbor Island, views of Downtown and the San Diego-Coronado Bay Bridge are more prominent given the closer distance to these features. Due to intervening opaque fencing adjacent to the walkway along the northern side of East Harbor Island, views of the Harbor Island East Basin or the Bay beyond are not available from the vantage points available along the sidewalk. The clusters of tall masts from the recreational boats that occupy the marina, including over 600 boat slips, within the East Basin are also visible from Harbor Island Drive and the waterfront promenade through the parking lots that exist on either side of the marina's main building. An additional waterside walkway extends behind the Coasterra building.

Due to its industrial nature, large expansive parking lots, and disjointed development pattern, the visual quality of East Harbor Island is considered low. However, viewer sensitivity in this area is considered high due to the public bayfront promenade along the southern shoreline and the intact views of the Downtown San Diego skyline that are available from areas within the subdistrict (see the *Scenic Vistas* discussion below).

Pacific Highway Corridor

The Pacific Highway Corridor Subdistrict comprises a narrow segment of land generally along the east side of Pacific Highway between Vine Street and Laurel Street. The visual character of this area is influenced by its adjacency to major transportation uses such as SDIA and Interstate 5. Elevated freeway on-ramps occupy the area from Vine Street to Sassafras Street. Parking lots for offsite long-term airport parking reside underneath the on-ramps and are enclosed by chain-link fencing. The freeway on-ramps, large surface parking lots, dense concentrations of parked cars, chain-link fencing, no vegetation, and high-power transmission lines in the background lend an industrial appearance to this area, especially in contrast to the newly constructed and abundantly landscaped airport parking and rental car facility on the west side of Pacific Highway, off of District property.

The District's headquarters are located south of Sassafras Street within the Pacific Highway Corridor. The District's eight-story building pops up out of this array of parking lots. The building has a utilitarian design and resembles a large white box with minimal exterior ornamentation and limited fenestration, which is confined to the upper stories. The size of the structure seems out of place in this area where other buildings and structures are substantially shorter. More parking lots are located south of the District's building; however, these lots generally include some landscaping and wrought-iron fences, which create a more attractive appearance compared to those to the north of Sassafras Street. Buildings in this area vary in their size and spacing within the lots. They are usually set back a considerable distance from the road with surface parking lots fronting the roadway, and they tend to consist of white one- or two-story warehouse structures.

Viewsheds within the Pacific Highway Corridor are very narrow and are generally confined to the roadway width of Pacific Highway and the immediately adjacent uses. Views of the high-rise buildings of Downtown are intermittently available, and views of SDIA are also intermittently available at crossroads.

This subdistrict generally lacks a cohesive visual context or any distinctive visual elements. Overall, visual quality and viewer sensitivity in this area is low.

Scenic Vistas

West Harbor Island

The existing PMP designates three scenic vistas within West Harbor Island: one at the intersection of the entry segment of Harbor Island Drive and Harbor Island Drive, one within the park farther west down Harbor Island Drive, and one near the western terminus of Harbor Island Drive.

The first scenic vista at the end of the entry segment of Harbor Island Drive is oriented in a southerly direction and includes the expansive views of the Bay in the foreground and middleground. NAS North Island in Coronado, the Downtown San Diego cityscape, and the San Diego-Coronado Bay Bridge comprise background views.

The second scenic vista is oriented in a southerly direction and includes the same views provided by the previous scenic vista (i.e., expansive views of the Bay stretching from Point Loma to Downtown San Diego).

The third is at the westernmost corner of the subdistrict, near the circular drive that provides access to the Tom Ham's Lighthouse restaurant. This vista is oriented in a southerly direction and provides

expansive views of the Bay stretching from the Point Loma peninsula in the west to Downtown San Diego in the east. Foreground and middleground views include the open waters of the Bay, including the navigation channels where passing vessels of varying shape, size, and purpose can be seen. Background views include the Point Loma peninsula, the bayfront of Coronado Island, including NAS North Island, and the high-rise buildings comprising the skyline of Downtown San Diego. A portion of the San Diego-Coronado Bay Bridge is also discernible in background views.

Spanish Landing

Along the mainland, one scenic vista is located at the westernmost boundary of the Harbor Island Planning District at Spanish Landing Park, off of Harbor Drive (just west of SDIA). This vista is oriented to the southwest. Views from this scenic vista include foreground views of the open water of the Harbor Island West Basin, middleground views of the many sailboats and their masts in the marinas of the basin, and background views of Shelter Island and Point Loma. The second scenic vista along the mainland is located at the eastern end of Spanish Landing Park, near the intersection of Harbor Drive and Harbor Island Drive. This vista is oriented to the south and looks into the Harbor Island West Basin. Foreground views comprise the open waters of the harbor, middleground views include the sailboats docked at the marinas, and background views are generally limited to the high-rise hotels that are located along Harbor Island Drive.

East Harbor Island

The existing PMP designates one scenic vista within East Harbor Island, which is located at the easternmost extent of the island, adjacent to the Island Prime restaurant, and is oriented in a southeasterly direction. Again, expansive views of the Bay are the primary visual feature within the viewshed of this vista. The views are very similar to the other scenic vista within East Harbor Island, including expansive views of the open waters and navigation channels of the Bay in the fore- and middleground views, and background views that include the Point Loma peninsula, the Coronado Bayfront, the skyline of Downtown San Diego, and the San Diego-Coronado Bay Bridge.

Pacific Highway Corridor

The existing PMP does not designate any scenic vistas within the Pacific Highway Corridor Subdistrict, and other vista areas identified for other planning districts do not contain views of this area.

Light and Glare

West Harbor Island

Primary sources of light within West Harbor Island include lighting on the exterior of the hotel buildings and restaurants, security lighting in the many parking lots, street lighting, and lighting along the docks of the marinas. Sources of glare generally include sunlight reflecting off the waters of the Bay and the Harbor Island West Basin, and sunlight reflecting off the surfaces of cars and boats. The overall nighttime lighting environment is considered low to moderate because the area does not require substantial amounts of night lighting; and the glare environment is considered low due to the lack of large structures containing highly reflective surfaces.

Spanish Landing

Primary sources of light within Spanish Landing include lighting on the exterior of the restroom buildings and security lighting in the parking lots, street lighting, and lighting from vehicles traveling along North Harbor Drive. Because there are older structures in this subdistrict, there may be unshielded outdoor lighting that could contribute to light spillage in the area. The brightly lit terminals and parking lots from the airport may also spill over into some portions of Spanish Landing, although given the distance and intervening structures and landscaping, visible lighting would not likely be highly intrusive to the users of this subdistrict.

Sources of glare generally include sunlight reflecting off the waters of the Bay and the Harbor Island West Basin, and sunlight reflecting off the surfaces of cars and boats. There are few nighttime activities (such as commercial or recreational activities that operate at night) that require substantial amounts of lighting in this subdistrict; thus, lighting is concentrated near walkways, parking lots, and intersections for safety. Therefore, the overall nighttime lighting environment is considered low to moderate. In addition, the glare environment is considered low due to the lack of large structures containing highly reflective surfaces.

East Harbor Island

Sources of light within East Harbor Island also include exterior lighting at the marina, restaurants, and other buildings within the subdistrict as well as security lighting at the many parking lots along this portion of the subdistrict. Sources of glare include sun reflecting off the waters of the Bay and the surfaces of cars parked at the parking lots and boats within the marina. The overall nighttime lighting environment is considered low to moderate because the area does not require substantial amounts of night lighting; the glare environment is considered low due to the lack of large structures containing highly reflective surfaces.

Pacific Highway Corridor

Most of the sources of light within the Pacific Highway Corridor are from street lights and security lights in the parking lots of the long-term airport parking facilities along this roadway. Sources of glare include reflections off parked cars in these parking facilities and occasionally light reflecting off airplanes. The overall nighttime lighting environment is considered moderate due to the long-term parking facilities, which maintain brightly lit parking lots for security reasons. The glare environment is considered low due to the lack of large structures containing highly reflective surfaces.

4.1.2.6 Planning District 3: Embarcadero

The Embarcadero Planning District (PD3) extends the length of San Diego Bay within the Downtown San Diego area, beginning at Laurel Street on the north end (just south of SDIA) and ending roughly at Park Boulevard, which is south of the Convention Center and north of the TAMT. The Embarcadero is broken down into three subdistricts: North Embarcadero, Central Embarcadero, and South Embarcadero, as described below. Overall, the visual character of the Embarcadero reflects a highly developed urban environment with a diverse mix of uses and building types, which are characteristic of active waterfront and downtown environments. The specific visual character and quality, scenic vistas, and sources of light and glare of each subdistrict are described below.

Visual Character and Quality

North Embarcadero

The North Embarcadero is bounded by Laurel Street and the “Crescent Zone” (the curvilinear portion of coastline that is located between the U.S. Coast Guard facility and the Grape Street Piers) at its northern end and Seaport Village at its southern end. The landside features at the northern end are dominated by the manufacturing facilities and office buildings of Solar Turbines, an industrial use that manufactures gas turbines for onshore and offshore electrical power generation, marine propulsion, and natural gas and oil production. Although somewhat obscured by vegetation, the cranes, piping, and scaffolding associated with Solar Turbines’ operations are visible in the midst of the large, white, approximately two- or three-story warehouse/office buildings of this large multi-block facility. Views consist of offshore small-craft anchorages as well as the skyline of Downtown San Diego. Views of the open navigation channels of the Bay with boats and ships of varying sizes, shapes, and purposes are also available from the Crescent Zone.

Moving south, the industrial character of Solar Turbines transitions to institutional uses with the four-story Beaux-Arts/Spanish Revival-style San Diego County Administration Center, which features a prominent clock tower, pink stucco siding, and a red tiled roof. The County Administration Center’s large pink, architecturally embellished building set within an expansive 1,500-foot long parcel creates a visually prominent feature within the North Embarcadero; however, it is not located on District property. The building is situated in a park setting that features a centrally located fountain within six segments of green lawn along the western side of the property; a long linear reflection pool with fountains that runs the length of the central portion of the site; and gardens with meandering paths and a whimsically designed splash park featuring undulating bright green, blue, and beige surfaces that flank the northern and southern sides of the building along the eastern length of the parcel. Views shift from offshore anchorages to large piers containing considerably larger vessels that are immediately adjacent to the waterfront.

The Administration Center is followed by a large hotel complex with multiple buildings that reach up to 14 stories. The remainder of the landside area of North Embarcadero is occupied by administration buildings for the U.S. Navy, including multi-story structures and single-story barracks-style facilities. The U.S. Navy buildings located south of Broadway are not located on District property.

The waterfront side of North Embarcadero is characterized by concrete pedestrian pathways and wide drives/parking aisles that provide direct vehicular and pedestrian access to the piers and anchorages of the various maritime enterprises that are accessible from the North Embarcadero. In addition, the newly constructed Phase 1 of the North Embarcadero Visionary Plan includes an outside café, waterside promenade, and gardens with jacaranda trees. Piers of varying lengths, widths, and materials punctuate the coastline of the North Embarcadero. The larger piers, comprising very wide, concrete-paved piers, include the B Street Pier, the Broadway Pier, and Navy Pier. These piers include buildings usually consisting of low-rise warehouses. In addition, parking lots are located on the B Street and Navy Piers.

Various types of ships and boats also contribute to the character of the waterfront along the North Embarcadero, ranging from small- to medium-sized harbor tour vessels to the nineteenth-century merchant ship *Star of India*, the USS Midway Museum, large cruise ships, and medium-sized commercial fishing vessels. There is also a considerable amount of public art located along and

adjacent to the continuous waterfront promenade, ranging from small, colorful, whimsically themed statuettes to large, somber war memorials.

Overall, due to the high variations in the development pattern, the mix of uses and activities, and the lack of any unique visual elements, the North Embarcadero Subdistrict has a low to moderate visual quality. However, given that this is a location that draws a high number of visitors and provides public access to the waterfront, viewer sensitivity is considered moderate to high.

Central Embarcadero

The Central Embarcadero begins west and south of Harbor Drive and includes Tuna Harbor Park and Ruocco Park and the Seaport Village retail complex, which wraps around the waterfront connecting North Embarcadero with South Embarcadero. Tuna Harbor Park is located on the G Street Mole and includes green lawns, pedestrian pathways, public art, a surface parking lot, and a restaurant. The Tuna Boat Basin, which provides commercial fishing boat berthing, is located on the south side of the G Street Mole. Ruocco Park is a small waterfront park that features green lawn, public art, and benches. Seaport Village is situated in a park-like setting south of Ruocco Park and houses more than 70 tourist-oriented gift shops, art galleries, and restaurants, one of which, the San Diego Pier Café, sits on a pier extending into the Bay in the middle of the Central Embarcadero. While there are several parking lots on the periphery of Seaport Village (mostly off of Harbor Drive), the whole of Seaport Village is pedestrian-oriented and contains a meandering network of paths. Similar to North Embarcadero, the parks within Central Embarcadero include public art. One of the more prominent pieces in the area is *Unconditional Surrender*, a statue featuring a 25-foot-tall sailor kissing an equally tall nurse, situated directly across from the *USS Midway*, in Tuna Harbor Park.

The western end of Seaport Village includes a collection of low-rise (one- or two-story) freestanding buildings that are clustered around and extending off of a central plaza area. The buildings feature mostly historically themed architectural styles ranging from traditional Mission and Spanish Revival to Victorian. From vantage points within the western portion of Seaport Village views are more congested due to the presence of several piers and other water-dependent uses contained within this area, such as small-craft marinas and a commercial fishing operation, that jut into the Bay off the south end of Tuna Harbor Park, which is at a perpendicular angle to the western end of Seaport Village.

The central portion of Seaport Village (i.e., the area generally located between Pacific Highway and Kettner Boulevard) includes a public waterfront park, the Embarcadero Marina Park North (EMPN), which is on a peninsula that extends off of Seaport Village into the Bay, and a large surface parking lot. EMPN includes passive-use amenities such as pedestrian pathways, green lawns, benches, and shade trees. The central portion of Seaport Village also houses a large square building with a central courtyard that fronts Harbor Drive, and houses The Headquarters at Seaport, which contains other shops and restaurants. In the central portion of Seaport Village, where the shoreline shifts from a north-south to an east-west orientation, views of the Bay broaden and encompass a large swath of the Bay spanning from the Point Loma peninsula in the north all the way to the low, elongated arch of the San Diego-Coronado Bay Bridge in the south.

Finally, the eastern end of Seaport Village includes a small collection of shops and restaurants, approximately 10 buildings, along the waterfront nestled behind the Manchester Grand Hyatt San Diego and west of the San Diego Marriott Marquis and Marina hotels. The buildings in this part of Seaport Village tend to feature architectural elements that are reminiscent of New England seaside

villages such as one- or two-story brick or gray clapboard sided structures, cupulas, faux lighthouses, etc. The view from the eastern end of Seaport Village also includes large swaths of the Bay, with the Coronado northern shoreline in the background.

The Central Embarcadero has a more unified and cohesive development pattern than other portions of PD3 as it is generally confined to two public parks that border the seaside-village themed Seaport Village. The visual quality is considered moderate to high, and because Seaport Village draws visitors seeking a waterfront shopping/dining location and is surrounded by other visitor-serving uses (hotels, the San Diego Convention Center [SDCC], etc.), visual sensitivity in this area is considered high.

South Embarcadero

The South Embarcadero area is bounded on the north by Seaport Village and on the south by the TAMT. It comprises mostly hotels and the SDCC.

Reflecting the South Embarcadero's proximity to Downtown and the SDCC, high-rise hotels, featuring multiple glass-clad towers of 20 or more stories, are located to the southeast of Seaport Village. The multi-story SDCC is situated centrally within the South Embarcadero and dominates the majority of the area. The SDCC features a modern architectural style, with an emphasis on geometry and horizontality. Two elongated, mid-rise segments extend off a central outdoor stairway. Building materials make heavy use of glass and concrete buttressing, with varying surface shapes, such as side-rounded glass walls on one story, diagonal glass walls on another, and vertical glass walls on another. The distinctive Sails Pavilion, with its white pointed fabric roof intended to be reminiscent of the sails and masts of a ship, is just north of center within the complex.

Embarcadero Marina Park South (EMPS) extends into the Bay from behind the SDCC and, similar to its northern counterpart (EMPN), includes publicly accessible open space with a parking lot, green lawns, pedestrian pathways, and benches. This park also includes basketball courts and a public fishing pier. A recreational boat marina, which is part of the San Diego Marriott Marquis and Marina, is located within the cove created by the two L-shaped segments that form EMPN and EMPS. The southernmost end of the South Embarcadero area is occupied by another modern high-rise hotel. Views from the South Embarcadero are similar to those of the southern portion of Central Embarcadero and generally include broad vistas of the Bay stretching from Point Loma to the San Diego-Coronado Bay Bridge; these views are particularly prominent from within the EMPS.

While the development pattern in this subdistrict is not as varied as it is in the North Embarcadero, it still contains a high degree of irregularity in terms of building sizes, massing, and lot orientation. In addition, there are no particularly unique visual elements within this subdistrict. As such, visual quality is considered moderate to low. Nevertheless, given that this is a waterfront location that provides a great deal of public access opportunities, viewer sensitivity in this area is generally considered high.

Scenic Vistas

North Embarcadero

There are seven designated scenic vistas within the North Embarcadero Subdistrict under the current PMP. Four are within the Crescent Zone, one is along the bayfront adjacent to the San Diego County Administration Center, one is from the end of Broadway Pier, and one is on top of the USS

Midway. All of these scenic vistas are oriented toward the Bay. From the northern portion of the North Embarcadero, foreground views of the Bay are limited to the U.S. Coast Guard Facility and the small sailboats and other small water craft anchored within the cove created by the Crescent Zone. Middleground views consist of the open water and navigation channels of the Bay, and background views include views of the land masses of Coronado and Point Loma. The northern portion of the North Embarcadero also includes views of the assemblage of high-rise buildings that comprise the Downtown San Diego skyline.

Views from Broadway Pier and from the top of the *USS Midway* include the open waters of the Bay in the foreground and middleground. Background views include the bayfront of Coronado.

Central Embarcadero

There are three designated scenic vistas within Central Embarcadero—one at the end of Tuna Harbor Park, one in Ruocco Park near the intersection of Pacific Highway and Harbor Drive, and the third from Seaport Village. Again, within the Central Embarcadero Subdistrict, views of the Bay comprise the primary scenic vistas. The bayfront within this area curves around from a north-south orientation to a northeasterly-southwesterly orientation, and the components within the vistas adjust accordingly. Within the north-south portion, views look west and primarily include open water of the Bay within background views of the Coronado waterfront spanning from the military uses of NAS North Island southward to residential and visitor-serving commercial uses (restaurants, small shops, etc.). Along the portion of the waterfront that is oriented northeast-southwest, foreground and middleground views are available of the open waters of the Bay with passing vessels of varying shape and size, as is Coronado's entire northern bayfront, from NAS North Island down to the San Diego-Coronado Bay Bridge (visible in background views). For the first time along the Embarcadero, the San Diego-Coronado Bay Bridge becomes a prominent visual component within the scenic vistas of the Bay.

South Embarcadero

There are seven designated scenic vistas within South Embarcadero under the current PMP—one is adjacent to the marina of the San Diego Marriott Marquis and Marina, five are within a designated (but not yet constructed) rooftop park/plaza in an area along the waterfront behind the existing SDCC that is proposed as an expansion to SDCC, and the last is off the pier adjacent to the Hilton San Diego Bayfront hotel. All of these scenic vistas are oriented toward the Bay and include expansive views of the Bay. Specifically, scenic vistas within the South Embarcadero Subdistrict are the same as those available from the northeastern-southwestern waterfront of the Central Embarcadero and consist of open waters of the Bay in foreground and middleground views and the northern Coronado waterfront from NAS North Island to the San Diego-Coronado Bay Bridge in the background.

Light and Glare

Within PD3, the land area surrounding the Bay is highly urbanized and supports a mixture of commercial, industrial, recreational, and marine-related uses. The existing nighttime lighting environment consists mainly of ambient light produced by interior and exterior building lights (office and commercial), park lighting, street lighting, parking lot lighting, and transitory lighting from headlights on automobiles and transit-related vehicles (i.e., buses and trolleys). Commercial developments, such as high-rise office buildings, contribute to ambient lighting conditions. Exterior security lighting and interior operational lighting at the buildings throughout Downtown cause light

spillover, which illuminates areas along the bayfront. In addition, several high-rise hotels and nearby adjacent residential buildings contribute to ambient nighttime lighting conditions in the form of spillover light from exterior and interior security and operational lighting. Overall, because the area is highly urbanized, existing ambient lighting levels are considered to be high.

North Embarcadero

Within North Embarcadero specifically most lighting sources are large hotel complexes along Harbor Drive as well as street lighting and transitory lighting from headlights from vehicles using Harbor Drive. Lighting from the piers also contribute to nighttime lighting within this subdistrict, including interior and exterior lighting for the buildings on the piers, and the various sources of lighting for the vessels docked at the piers. As noted above, the nighttime lighting environment is considered high in this area.

Sources of glare include sun reflecting off the glass surfaces of the nearby high-rise buildings as well as the windshields of passing and parked vehicles. Sun reflecting off the waters of the Bay is another source of glare in the area. The overall glare environment in the North Embarcadero is considered moderate.

Central Embarcadero

Within the Central Embarcadero, most of the nighttime lighting comes from Seaport Village, including interior and exterior lighting for the many shops and restaurants, and exterior lighting along the pathways and security lighting within the parking lots. The parks within Central Embarcadero, including Tuna Harbor Park, Ruocco Park, and EMPN, also include safety and security lighting. Waterside uses within this subdistrict are minimal. There are not any large piers at which large vessels are docked or upon which buildings have been constructed, and waterside sources of light are generally confined to light emanating from passing vessels. Overall, due to its adjacency to Downtown San Diego, ambient nighttime lighting conditions in this area are considered high.

Sources of glare include sun reflecting off the glass surfaces of the nearby high-rise buildings as well as the windshields of passing and parked vehicles. Sun reflecting off the waters of the Bay is another source of glare in the area. The overall glare environment in the Central Embarcadero is considered moderate.

South Embarcadero

Sources of light within the South Embarcadero comprise mostly large hotel complexes such as the Manchester Grand Hyatt San Diego, the San Diego Marriott Marquis and Marina, and, farther south, the Hilton San Diego Bayfront. The SDCC also contributes a large share of ambient lighting from interior and exterior building lighting. Finally, EMPS contributes to nighttime lighting in this area. Petco Park, just north of the South Embarcadero, is a major contributor to nighttime lighting within the immediately adjacent area during the baseball season from both normal stadium lighting and occasional fireworks displays. Finally, transitory nighttime lighting from headlights on automobiles and transit-related vehicles (i.e., buses and trolleys) further contributes to ambient lighting conditions in the area. Waterside sources of light include the large marina associated with the San Diego Marriott Marquis and Marina and the smaller large-vessel marina at the Fifth Avenue Landing behind the SDCC. Again, due to its adjacency to Downtown San Diego, ambient nighttime lighting conditions in this area are considered high.

Sources of glare include sun reflecting off the glass surfaces of the nearby high-rise buildings and the windshields of passing and parked vehicles. Sun reflecting off the waters of the Bay is another source of glare. The overall glare environment in the South Embarcadero is considered moderate.

4.1.2.7 Planning District 4: Working Waterfront

The Working Waterfront Planning District (PD4) comprises three subdistricts: the TAMT, Cesar Chavez Park, and Harbor Drive Industrial, which includes all of the remaining portion of the planning district south of Cesar Chavez Park, terminating at Chollas Creek. As indicated, this planning district is a working waterfront area primarily consisting of TAMT as well as ship construction and ship repair yards. Overall, the visual character of PD4 is defined by the heavy industrial uses that occupy this area.

For the TAMT Subdistrict, the discussion below provides a summary of the visual character and resources and light and glare as defined by the *Tenth Avenue Marine Terminal Redevelopment Plan* and its Final Environmental Impact Report (EIR), which were adopted and certified, respectively, by the Board of Port Commissioners (Board) in December 2016. These documents have been incorporated into this Program EIR (PEIR) by reference (see Chapter 1, *Introduction*). For the remainder of PD4, visual character and resources were based primarily on field observations.

Visual Character and Quality

TAMT

TAMT is a marine terminal located on paved landfill within a trapezoidal-shaped, 96-acre parcel that extends into the Bay. TAMT includes eight berths capable of accommodating ocean-going vessels and handles over a million metric tons of import, export, and domestic cargo per year, including dry bulk, liquid bulk, refrigerated container, and multi-purpose general cargo. As such, the site contains a relatively orderly arrangement of structures and infrastructure to process this cargo, including large, nondescript warehouses and transit sheds; silo complexes and conveyer systems; bulk unloaders; cranes; stacks of containers; and large, multi-story liquid storage tanks. There is also a significant amount of paved, open storage area as well as large paved roadways and rail tracks running into and throughout the site. The heights, size, and shape of these structures vary throughout the site. The four warehouses and transit sheds tend to be long, rectilinear structures reaching a height of approximately four stories that are utilitarian in design and contain no architectural ornamentation. In contrast, the silos include tall, cylindrical towers while the liquid bulk containers comprise large round tanks. In addition, as shipping operations occur at TAMT, the locations and activities at the site change frequently, and stacks of containers are relocated, trucks arrive and leave, and other miscellaneous equipment is relocated as needed. Also, vessels are not always berthed at the TAMT; however, they can be present several days per week.

Due to the lack of a cohesive development pattern of TAMT, which includes a collection of warehouses, cranes and other offloading equipment, trains, cargo containers, and open laydown areas, the visual quality of this area is considered low. In addition, TAMT is not publicly accessible, and while it is visible from other nearby areas that are publicly accessible, viewers would have low visual sensitivity related to the terminal.

Cesar Chavez Park

Cesar Chavez Park is a small waterfront park that is nestled amongst this otherwise highly industrial area. The park is south of TAMT and north of the Harbor Drive Industrial Subdistrict. The visual character of the park is what one would expect for a waterfront community park. It covers approximately 4 acres and consists mostly of large green lawns, which contrast sharply with the heavily paved parcels of the neighboring industrial uses. The park also includes picnic and playground areas, concrete pathways, and a narrow recreational pier extending approximately 700 feet into the Bay. The park itself does not contain any visually prominent features, but the San Diego-Coronado Bay Bridge is just south of the park and the imposing height and broad arch of the bridge provides a dramatic visual backdrop. Overall, the visual quality of this park is moderate. Given its bayfront location, viewer sensitivity in this area is considered moderate to high.

Harbor Drive Industrial

The Harbor Drive Industrial Subdistrict includes ship building facilities and ship repair yards. The irregular development pattern of this area contrasts sharply with the more orderly arrangement of the TAMT site, and the visual appearance is defined by a densely developed and haphazard collection of structures required for these uses, such as warehouses of varying shapes and sizes and piers of various lengths and widths. Many of the piers include ships in various stages of construction or repair. Cranes and other equipment are often located adjacent to these piers. Cluttered storage yards are also typical features in this area. The visual quality of this area is low, and viewer sensitivity is also low.

Scenic Vistas

TAMT

The current PMP does not identify any designated vista areas in the TAMT Subdistrict.

Cesar Chavez Park

The current PMP does not designate any vista areas within Cesar Chavez Park.

Harbor Drive Industrial

The current PMP does not identify any designated vista areas within the Harbor Drive Industrial Subdistrict.

Light and Glare

TAMT

TAMT includes nighttime security and operational lighting as well as lighting for evening and nighttime offloading operations. High-intensity boom lighting and high-mast lighting is provided throughout the terminal for security purposes and operational activities. Also, during nighttime loading or offloading of ships, barges, and containers, floodlights attached to the bottoms of crane booms and sides of crane structures illuminate cranes and the areas around them. Headlights from vehicles transferring container goods to and from the berths are another source of transitory

nighttime lighting. The overall onsite nighttime lighting environment is considered high because the terminal requires nighttime lighting for operations.

Existing sources of daytime glare include bidirectional transitory glare from trucks, cars, and semi-trailers driving along adjacent streets and internal streets where sunlight reflects off windshields. Because TAMT does not contain structures with reflective architectural finishes, the overall daytime glare environment is considered low. Glare conditions on TAMT are relatively low in relation to offsite conditions.

Cesar Chavez Park

Nighttime lighting sources at Cesar Chavez Park include security lighting at the parking lot and along the park's walkways and on the recreational pier. These lights are generally lower intensity lights that are shielded and pointed downward such that most of the lighting is confined within the site and does not spill over to adjacent areas. Overall, lighting conditions at Cesar Chavez Park are considered moderate to low.

Sources of glare generally include sunlight reflecting off windshields of vehicles parked within the parking lot or passing on the nearby local roadways, or sunlight reflecting off of the Bay. There are few structures at Cesar Chavez Park, none of which include any highly reflective surfaces; therefore, the glare environment is considered low.

Harbor Drive Industrial

Similar to TAMT, the Harbor Drive Industrial area contains security and operational lighting, and floodlights attached to the bottoms of crane booms and sides of crane structures, which illuminate cranes and the areas around them. Vehicle lighting is another source of nighttime lighting in this area. The overall nighttime lighting environment is considered moderate to high because several areas require nighttime lighting for operations.

The subdistrict includes numerous structures with metallic siding, which creates a source of daytime glare in addition to sun reflecting off of the metallic and glass surfaces of vessels and vehicles. Glare conditions in this subdistrict are considered moderate.

4.1.2.8 Planning District 7: South Bay

The South Bay Planning District (PD7) includes the area at the extreme southern end of the Bay and does not have any subdistricts.

Visual Character and Quality

The South Bay Planning District is an odd-shaped district that is entirely within the Bay and comprises either open water or small areas of marshy land on its western side. This planning district contains no development. From a visual perspective, this area melds into, and is largely indistinguishable from, the rest of the Bay. Because it is perceived as being part of the natural Bay, the visual quality is considered high, as is viewer sensitivity.

Scenic Vistas

The current PMP does not identify any designated vista areas within this planning district.

Light and Glare

The South Bay Planning District does not contain any development and does not include any sources of nighttime lighting. The main sources of transient lighting are headlights from vehicles driving along SR-75 (Silver Strand Boulevard) and some nighttime lighting from the nearby naval base (Silver Strand Training Complex). The only sources of glare are the sunlight reflecting off the water and passing vehicles on nearby roadways.

4.1.2.9 Planning District 8: Imperial Beach Oceanfront

The landside portion of the Imperial Beach Oceanfront Planning District (PD8) is largely confined to the approximately 1.4-mile long beach, but also includes portions of Dunes Park, a commercial plaza adjacent to the pier, the Dempsey Holder Safety Center, a small parking lot at the southeast corner of Palm Avenue and Seacoast Drive, and a second small parking lot at the northeast corner of Elkwood Avenue and Seacoast Drive. The waterside portion of PD8 comprises approximately 405 acres of open water of the Pacific Ocean and extends out from the beach approximately 2,000 feet in the southern end and up to 2,700 feet in the northern end. There are no subdistricts in the Imperial Beach Oceanfront Planning District.

Visual Character and Quality

Overall, the portion of Imperial Beach adjacent to PD8 is a small coastal community. The planning district itself is limited to a portion of the narrow sandy beach and a beachside park (Dunes Park) situated along Seacoast Drive at Daisy Avenue. The park generally consists of a large green lawn with paved walking paths, trees (mostly tall palm trees), picnic tables, benches, restroom buildings, and public art (e.g., sculptures). The planning district also includes the Imperial Beach Pier, a narrow wooden recreational pier that extends approximately 1,300 feet into the ocean. The primary views are of the Pacific Ocean. Additionally, views of the Downtown San Diego skyline and the end of the Point Loma Peninsula are visible in the distance from the Imperial Beach Pier. The pier has a nautically themed seafood restaurant at its western end and is surrounded by the open ocean and the beach. Finally, two small parcels within the planning district east of Seacoast Drive contain two small paved parking lots. The Dempsey Holder Safety Center is located along the beach at the terminus of Elder Avenue and comprises a two-story building with a three-story-tall lifeguard tower. The structure is contemporary and features asymmetrical massing, multiple gabled roofs clad with corrugated metal, and prominent, projecting eaves. The building contains several siding styles, including concrete bricks, blue bricks, board and batten, and clapboard. This planning district also includes a parcel adjacent to Pier Plaza, which is located north of the Dempsey Holder Safety Center and comprises a small paved plaza at the entrance to the pier. This parcel includes a single-story retail building housing several small restaurant/snack establishments and a gift shop. Similar to the Dempsey Holder Safety Center, this building is of a contemporary design featuring an inverted gable roof and wide overhanging eaves supported by angled wooden beams that create a loggia-type space.

Uses surrounding PD8 along Seacoast Drive that contribute to the overall visual character of the area comprise almost entirely relatively dense residential development that fronts the beach, including closely positioned one- or two-story single-family homes. There are also several large beachside condominium complexes. Small commercial uses, such as small restaurants, boutique shops, and hotels, are also near the waterfront, fronting or set back from Seacoast Drive. Because the

area typifies a quaint coastal town with a relatively modest scale of development adjacent to a beach, visual quality is considered moderate to high, and viewer sensitivity is considered high.

Scenic Vistas

The Imperial Beach Oceanfront Planning District includes seven designated scenic vistas in the current PMP. Three are oriented to the west looking into the Pacific Ocean. These include one at the western end of the Imperial Beach Pier, one within Dunes Park, and one at the terminus of Imperial Beach Boulevard (described further below). These vistas offer expansive views of the open ocean. There are also three scenic vistas along the Imperial Beach Pier. Two are located near the beginning of the pier with one looking north and one looking south. These two vistas offer views of the coastline and the waves breaking on the beach in each respective direction. The third vista is near the end of the pier, looking northward, and views include the coastline, with waves breaking on the beach, open ocean, and Downtown San Diego and Point Loma in the distance.

Finally, the last scenic vista within this planning district is at the corner of Imperial Beach Boulevard and Seacoast Drive, looking to the southeast. The Tijuana Slough National Wildlife Refuge is located in this direction; however, views of this resource from the corner of this intersection (where the vista area is indicated) are blocked by a three-story residential building that is not located on District property. The refuge is visible past this building along both Seacoast Drive and Imperial Beach Boulevard. Views include a large, flat open space occupied by wetlands and tall grasses.

Light and Glare

The Imperial Beach Oceanfront Planning District is a relatively urbanized area, although at a smaller scale and lower concentration of development than the more densely developed parts of the Bay (such as the Embarcadero or Coronado). Lighting sources within PD8 itself generally include security lighting at the parks and parking lots, and lighting along the pier. The lights used along the pier and in the parks include short poles with downward-oriented and shielded bulbs; thus, spillover light is minimized. Nearby lighting sources include interior and exterior lighting for the single-family and multi-family residential buildings and for the area's small commercial establishments. Street lighting and vehicular lighting are also present. The ambient nighttime lighting environment is low.

Sources of glare are largely confined to sunlight reflecting off the water and off of vehicles parked within and passing through the district. Overall, glare conditions are considered low.

4.1.2.10 Planning District 9: Silver Strand

The Silver Strand Planning District (PD9) is a narrow stretch of land on the western side of the Bay that separates the Bay from the Pacific Ocean and abuts Coronado on the north and Imperial Beach on the south. A large portion of the planning district consists of open water, primarily along the Bayside shoreline of the Silver Strand within the southern half of the planning district. The planning district is divided into three subdistricts: State Park Basin, which comprises the open water and a small sliver of the shoreline of Crown Cove; Crowne Isle, which includes Crowne Isle and its marina; and Grand Caribe Isle and South Cays, which spans the rest of the length of the planning district and is bounded on the north by Crowne Isle and on the south by the U.S. Navy's Silver Strand Training Complex.

Visual Character and Quality

State Park Basin

The majority of the State Park Basin Subdistrict comprises the open water of Crown Cove, which is bordered on the north and west by the sandy narrow beach, a portion of which is also part of the subdistrict. The only structure in the waterside portion of the subdistrict is a short pier with a dock at the end that is associated with the Crown Cove Aquatic Center of Southwestern College, which is adjacent to the Silver Strand State Park, and partially located off of District property. The landside portion, as mentioned above, includes a short and very narrow stretch of beach along the straight portion of shoreline in the south of the subdistrict, just north of Coronado Bay Road. This area is mostly sand, but some vegetation also exists along the water. A view of the open water of the Bay beyond Crown Cove is available. Visual quality within this subdistrict is considered low to moderate and viewer sensitivity is moderate.

Crown Isle

Crown Isle is a small island that is connected to the mainland by Coronado Bay Road, which is a narrow paved roadway extending east from Silver Strand Boulevard. The road has a parking barrier gate, allowing entry to guests of Loews Coronado Bay Resort as well as the public for a fee, and is flanked by an evenly spaced row of palm trees and grass. Loews Coronado Bay Resort, which is the only use on Crown Isle, is a sprawling complex with six low-rise (approximately four-story) buildings—a large building located at the entrance, or western end, of Crown Isle, and five others that fan out along the northern and eastern shorelines of the island. Several pools and other athletic courts are centered among these buildings. There is also a collection of small cottages at the northeastern corner of the island. A roadway that provides angled parking spaces surrounds the entire complex along the outer edge of the island. A marina is located off the southern shoreline of the island. While the development pattern is unified (because all the buildings belong to the same resort), the architectural style is not distinctive, nor are there any prominent or unique visual elements within this area. Therefore, visual quality is considered moderate. However, because this area is publicly accessible and provides views of the Bay, viewer sensitivity is considered moderate to high.

Grand Caribe Isle and South Cays

The Grand Caribe Isle and South Cays Subdistrict includes the waters of the Bay offshore from the Coronado Cays, which is a large residential development (up to 1,200 condominiums, townhomes, and single-family homes). Most of this area includes narrow waterways that are lined with marinas between the residential development and Grand Caribe Isle. Grand Caribe Isle is a small “island” situated bayward (to the east) of Coronado Cays. The southern portion of the isle (south of Grand Caribe Causeway) is undeveloped and largely contains natural vegetation as well as hiking paths. A small park landscaped with green lawn is adjacent to and situated to the south of the roadway. The western side of the northern portion of the isle contains small commercial establishments and their parking lots and the Coronado Cays Yacht Club, including a small building, swimming pool, and marina at the northern tip of the island. The bayside of the isle contains undeveloped, natural open space. The visual quality is considered moderate. The area does not have a cohesive development pattern, but the presence of natural landscape set against the Bay would be considered pleasant to viewers along the hiking paths. As such, viewer sensitivity is considered moderate to high.

To the south of Grand Caribe Isle there is a waterside area adjacent to the southern end of the Coronado Cays. This area is open water and does not contain any marinas within the water.

Scenic Vistas

State Park Basin

There are no existing designated scenic vistas in the current PMP within the State Park Basin Subdistrict.

Crown Isle

There are no existing designated scenic vistas in the current PMP within the Crown Isle Subdistrict.

Grand Caribe Isle and South Cays

Grand Caribe Isle includes one scenic vista in the current PMP. That scenic vista is located at the roundabout at the end of Grand Caribe Isle. The vista is oriented toward the east, with expansive views of open water of the Bay in the foreground and the marina within the Chula Vista Bayfront Planning District (referred to as Planning District 6, Chula Vista Bayfront of the current PMP) in the background.

Light and Glare

State Park Basin

There are no existing sources of light within the State Park Basin Subdistrict. Adjacent sources of light include minimal interior/exterior building lighting associated with the Crown Cove Aquatic Center and headlights from cars traveling on SR-75/Silver Strand Boulevard. The primary source of glare in the subdistrict is sun reflecting off the waters of Crown Cove. Minor sources of glare also include sunlight reflecting off the metallic and glass surfaces of cars in the vicinity. Lighting and glare conditions in the subdistrict are considered low.

Crown Isle

Crown Isle is fully developed with a large resort comprising several buildings, outdoor tennis courts and pools, a roadway, parking lots, and a marina. Nighttime lighting associated with these uses includes interior and exterior building lighting, roadway lighting, and security lighting throughout the site. Other sources of light include headlights from vehicles in the area and lighting along the marina docks and for the boats at the marinas. Sources of glare include sunlight reflecting off of the water of the Bay as well as the windows and metallic surfaces of cars. Lighting conditions are considered moderate, while glare conditions are considered low.

Grand Caribe Isle and South Cays

Sources of nighttime lighting within the Grand Caribe Isle and South Cays Subdistrict are limited to roadway lighting along Grand Caribe Causeway and interior/exterior lighting associated with the commercial uses and yacht club as well as parking lot lighting. There is no nighttime lighting within the southern portion of the isle or in the South Cays. Nighttime lighting conditions in this area are

considered low. However, the subdistrict is adjacent to the large Coronado Cays residential development, which emits a moderate amount of nighttime lighting in the area compared to adjacent uses. Sources of glare include sunlight reflecting off the waters of the Bay and off the metallic and glass surfaces of cars in the area. Glare is considered low in this area.

4.1.2.11 Planning District 10: Coronado Bayfront

The Coronado Bayfront Planning District (PD10) includes the shoreline of Coronado from Alameda Boulevard in the northwest, adjacent to NAS North Island, to just south of Avenida Alunar in the southwest area of Coronado, just before the Silver Strand. This planning district is divided into two subdistricts: North Coronado, which extends from SR-75/San Diego-Coronado Bay Bridge in the south to Alameda Boulevard in the north; and South Coronado, from SR-75/San Diego-Coronado Bay Bridge in the north to approximately Avenida Alunar in the south.

Visual Character and Quality

North Coronado

Aside from the naval base, which is not part of the subdistrict, North Coronado comprises mostly commercial and recreational uses, including the Ferry Landing Marketplace, which is a collection of shops and restaurants that are housed in single-story buildings, reflecting the Cape Cod style (cottages with natural wood siding and moderately pitched gable roofs). The marketplace is centered around the publicly accessible Coronado Ferry Landing Park, which comprises a green lawn, a small beach area fronting the Bay, and the Bayshore Bikeway. Coronado Ferry Landing Park connects to Centennial Park, which is located off 1st Street and Orange Avenue via a bayfront promenade and is not located on District property. The northern shoreline of North Coronado includes expansive views of the Bay with the skyline of Downtown San Diego set behind it. Along the eastern shoreline of North Coronado, only peripheral views of the Downtown San Diego skyline are available, along with expansive views of the Bay, with the Working Waterfront in the background, and the San Diego-Coronado Bay Bridge, which features prominently within waterfront vantage points along this stretch of shoreline. Finally, a portion of the southern end of North Coronado is occupied by the sprawling complex of the Coronado Island Marriott Resort and Spa. The main building includes a W-shaped, white, three-story structure of a contemporary style. The property also includes a number of cottages, and multiple swimming pools and tennis courts.

The southeastern bayfront of North Coronado comprises large swaths of green lawns, associated with Coronado Tidelands Park (bounded on the south by SR-75/San Diego-Coronado Bay Bridge). The park includes four baseball diamonds, a children's playground, a small beach, a skate park, and a portion of the Bayshore Bikeway. Benches and public art are also located within the park, and a small-vessel anchorage is located offshore.

In general, the visual quality of North Coronado is considered moderate to high, given the uniformity of the development pattern, scale, and styles, all set within a waterfront location. Similarly, viewer sensitivity in this area is also considered high.

South Coronado

The vast majority of the South Coronado Subdistrict is occupied by the Coronado Municipal Golf Course, which extends along the eastern shore of the Coronado Bayfront, south of the San Diego-

Coronado Bay Bridge, and wraps around into Glorietta Bay. Similar to views of most golf courses, views of the Coronado Municipal Golf Course consist of an expansive manicured green lawn dotted by sand pits, trees, water features, and putting greens. The clubhouse is situated in the middle and includes a contemporary building with eclectic Mediterranean-style architectural embellishments, such as stucco siding, a red tiled roof, columns, and arched doorways. Additionally, there is a small stretch of beach along the southern tip of the golf course. Distant views of the working waterfront are in the background.

Glorietta Bay is a small bay, nestled within the southern end of Coronado Island where the island meets the Silver Strand. It connects to San Diego Bay at an opening within its eastern end. With the exception of the Coronado Yacht Club, the District's jurisdiction is largely contained to the waterside area, which is occupied by two marinas with hundreds of boat slips. Most of the slips are intended for small vessels; however, several slips at the Glorietta Bay Marina can accommodate larger vessels. The Coronado Yacht Club is situated south of the golf course and comprises a large, surface parking lot as well as a single-story clubhouse and green lawn. Views from waterfront vantage points in this area consist primarily of the marinas that occupy Glorietta Bay. The concentration of masts obscures longer-range views, and views of the San Diego Bay are only intermittently available within this area.

Overall, the visual quality of South Coronado is considered moderate to high. Golf courses are generally considered pleasant components within viewsheds due to their well-maintained, expansive green lawns that are dotted by small ponds or sand pits and that undulate from the dark, thick green of the rough grass to lighter greens of the smoothly cropped fairways and putting greens. However, the area surrounding Glorietta Bay has a less unified appearance due to the presence of large parking lots within which buildings of varying size and style are positioned. Nevertheless, given that this is an active and highly visible waterfront location with a high number of visitors, viewer sensitivity is considered high.

Scenic Vistas

North Coronado

There are five existing designated scenic vistas within the North Coronado Subdistrict. Three are along the northern waterfront area, all oriented toward the northeast in the direction of Downtown San Diego—one is at the end of Orange Avenue, one at the end of C Avenue, and one at the end of B Avenue. These vistas offer expansive views of the Bay with the high-rise buildings comprising the Downtown San Diego skyline in the background.

The other two scenic vistas are along the eastern side of the North Coronado Subdistrict, one at the end of 2nd Street, before the Coronado Island Marriott Resort and Spa, and one at the end of 3rd Street where it meets the Coronado Tidelands Park. Views from the 2nd Street scenic vista are dominated by the grounds and buildings of the Marriott resort with a portion of the span of the San Diego-Coronado Bay Bridge in the background and a fleeting glimpse of the waters of the Bay. However, due to the prominence of the hotel's features in foreground views, neither expansive nor prolonged views of scenic resources such as the bridge and the Bay are available from this vantage point. Views from the scenic vista on 3rd Street include the green lawns and baseball fields of Coronado Tidelands Park in the foreground with the majority of the San Diego-Coronado Bay Bridge, including a large stretch of its span and supporting piers, in the background. The waters of the Bay with the cranes from the Working Waterfront are visible behind and beneath the bridge. Because

the park is only minimally developed, views of scenic resources within the viewshed of the designated vista are largely intact.

South Coronado

There are no currently designated scenic vistas within the South Coronado Subdistrict, and it is not visible from scenic vistas in other planning districts.

Light and Glare

North Coronado

North Coronado is a relatively densely developed urban area, and lighting sources are typical of urban areas, including security lighting within the waterfront parks, parking lots, and along the Bayshore Bikeway; interior/exterior building lighting at residential uses; street lighting in the parking lots of the commercial uses along First Street; and security and operational lighting for the Marriott hotel, including bright nighttime lighting for their tennis courts. Cars also contribute to ambient lighting conditions in this area. As such, the ambient nighttime lighting environment is considered moderate.

Sources of glare include the sunlight reflecting off the waters of the Bay, as well as sunlight reflecting off of the glass and metallic surfaces of cars. The overall glare conditions are considered moderate to low.

South Coronado

The majority of South Coronado is occupied by the golf course, which does not offer nighttime tee times. Most of the course is not lit at night; however, there is some security lighting along the walking paths, and the parking lot and clubhouse also contain nighttime lighting for safety and ambience. Along Glorietta Bay, sources of nighttime lighting include interior and exterior lighting for the yacht club and marinas and their parking lots, street lighting along Pomona Avenue/Strand Way, lighting for the piers and slips at the marinas, and lighting used on the boats. Nighttime lighting conditions are moderate.

Sources of glare include the sunlight reflecting off the waters of the Bay, as well as sunlight reflecting off of the glass and metallic surfaces of cars and boats. Overall, glare conditions are considered moderate.

4.1.3 Laws, Regulations, Plans, and Policies

4.1.3.1 State

California Scenic Highway Program

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program, which was created in 1963 by the California legislature to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The program includes a list of highways that are eligible for designation as scenic

highways or that have been designated as such. A highway may be designated as scenic based on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263.

California Coastal Act

The proposed PMPU area is located within the California Coastal Zone and is subject to the California Coastal Act (CCA). Pursuant to Section 30715 of the CCA, future projects that are considered to be "appealable development" as defined in the CCA must be consistent with the Chapter 3 policies of the CCA, including policies that address visual access to the coastal zone. Section 30251 states: "The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance . . . [and] [p]ermitted development shall be sited and designed . . . to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas."

Port of San Diego Coastal Development Permit Regulations

The District's Coastal Development Permit (CDP) regulations include application requirements for both non-appealable and appealable developments. As part of this CDP application review process, applicants are required to provide "a description of the proposed development sufficient to determine whether the project complies with the certified Port Master Plan." (District CDP Regulations, Sections 10(a)(1) and 11(a)(1).) As part of the CDP approval process PMP consistency findings are required (District CDP Regulations, Sections 10(c)(1)(c) and 11(c)(1)(c)). This includes review of projects for consistency with the proposed PMPU, and its implementing goals and policies described in the subsequent section.

4.1.4 Project Impact Analysis

4.1.4.1 Methodology

Aesthetic experiences can be highly subjective and vary from person to person; therefore, when feasible, it is preferable to evaluate aesthetic resources using a process that strives to objectively identify the visual features of the area, their importance, and the sensitivity of the associated viewers. The proposed PMPU-related changes to the aesthetic character of the PMPU area are identified and qualitatively evaluated based on the potential of future development to result in the substantial adverse modification to the existing physical conditions.

Proposed PMPU-related changes are evaluated using the threshold criteria discussed in Section 4.1.4.2, *Thresholds of Significance*, to determine significance. It should be noted that views from private property are generally not considered protected by the District. As such, any perceived impacts of the proposed PMPU on private views are not considered significant environmental effects under the California Environmental Quality Act (CEQA) (*Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477).

An evaluation of the proposed PMPU area and the potentially affected environs served to identify indicators of public sensitivity to changes to views. The range and quality of public views within the PMPU area were determined by reviewing street maps, proposed scenic vista areas and view corridor extensions identified in the proposed PMPU, and photos of areas within the planning districts. Consideration was given to how viewers within each planning district would experience changes related to implementation of the proposed PMPU, as well as the structures, vegetation, topographic features, or other intervening obstacles that may be present within the viewshed of proposed scenic vista areas and view corridor extensions.

4.1.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining the significance of aesthetics and visual resources impacts resulting from implementation of the proposed PMPU. The determination of whether an aesthetics and visual resources impact would be significant is based on the thresholds described below and the professional judgment of the District as Lead Agency and based on the evidence in the administrative record.

Impacts are considered significant if the proposed PMPU would result in any of the following.

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
3. In non-urbanized areas, substantially degrade the existing visual character and quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage points), or in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.
4. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

4.1.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policies and development standards would have the potential to avoid or reduce impacts associated with aesthetics and visual resources and are considered in the impact analysis that follows.

WLU Policy 2.1.1 The planning districts shall be established based on their physical, recognizable location and consideration of established municipal boundaries and shall be organized in the following manner (refer to Figure 3.1.1, Baywide Water and Land Use Designations):

- Planning District 1: Shelter Island
- Planning District 2: Harbor Island
- Planning District 3: Embarcadero
- Planning District 4: Working Waterfront
- Planning District 5: National City Bayfront – not a part of this Plan
- Planning District 6: Chula Vista Bayfront – not a part of this Plan

- Planning District 7: South Bay – Pond 20 portion not a part of this Plan
- Planning District 8: Imperial Beach Oceanfront
- Planning District 9: Silver Strand
- Planning District 10: Coronado Bayfront

WLU Policy 2.1.2 Planning districts shall be organized by subdistricts, as necessary, to differentiate their distinct character. For planning districts not containing subdistricts, reference to subdistrict visions, policies, and standards shall apply to the entire planning district.

WLU Policy 2.2.1 The District and its permittees shall implement planned improvements and special allowances to facilitate public health, safety, and welfare and provide public coastal access and enjoyment of the waterfront (refer to Chapter 5, Planning Districts, Planned Improvements).

WLU Policy 2.2.2 To maintain a planning district's distinct character, all development shall be in accordance with the associated subdistrict vision (refer to Chapter 5, Planning Districts, Subdistrict Vision) or planning district vision (refer to Chapter 5, Planning Districts, Vision), where applicable.

WLU Policy 2.2.3 Phased development shall be coordinated in a manner to ensure that landside and water access improvements are integrated in a cohesive and complementary fashion (refer to Chapter 5, Planning Districts, Planned Improvements).

WLU Policy 3.2.1 Visual access locations (scenic vista areas, view corridor extensions, Window to the Bay, and walkways) shall be maintained and protected, as shown on the Chapter 5, Planning Districts: Coastal Access Views and Pathways Maps.

WLU Policy 3.2.2 Permittees of development shall preserve visual access through scenic vista areas, view corridor extensions, and walkways, in accordance with:

- a. Chapter 4, Baywide Development Standards;
- b. Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict; and
- c. Chapter 5, Planning Districts applicable Coastal Access Views and Pathways Maps.

WLU Policy 3.2.3 Coastal-enhancing development should provide opportunities for the public to view maritime operations when located nearby from vantage points that are physically accessible.

WLU Policy 3.2.4 Development, when located adjacent to commercial fishing operations, shall provide opportunities for public viewing of commercial fishing activities, such as fresh fish offloading, net mending, and fresh fish markets, to reinforce the working waterfront identity.

WLU Policy 3.2.5 Development shall be set back from the water's edge and recreation open space to avoid creating a walling-off effect.

WLU Policy 4.2.4 Development-related signage shall not impede or detract from public views of the coast. Signage shall be consistent with Chapter 4, Baywide Development Standards, and other District signage guidelines.

WLU Policy 4.2.5 Development shall include wayfinding signage to inform the public of nearby waterside promenades, scenic vista areas, and key public areas and amenities such as docks, piers, and beaches.

WLU Policy 3.1.8 Development adjacent to Recreation Open Space shall comply with, height limit, setback, and stepback requirements in accordance with:

- a. Chapter 4, Baywide Development Standards; and
- b. Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

ECO Policy 1.1. Development above the water or adjacent to sensitive habitat areas should use ecologically sensitive lighting that is shielded and directed away from the water or sensitive habitat areas, sensor activated, and of the lowest possible color temperature that also meets public safety requirements.

In addition to the policies identified above, the proposed PMPU identifies development standards that would also avoid or reduce impacts related to aesthetic and visual resources. Specifically, Chapter 4, *Baywide Development Standards*, of the PMPU establishes requirements for the future physical development of property and as stated, 'shall be applied consistency baywide, to development in all planning districts, except where specifically noted in a subdistrict development standard. In addition to compliance with the baywide development standards, all development shall conform to the subdistrict development standards described in Chapter 5, *Planning Districts*, of the PMPU. Section 4.4.3, *Standards for View Protection*, of the PMPU establishes requirements related to the protection of views and physical access for view corridor extensions, scenic vista areas, and walkways. The following requirements apply baywide:

1. The following features may be located within scenic vista areas, view corridor extensions, and walkways:
 - a. Directional and wayfinding signage;
 - b. Business signs serving a waterfront or water use;
 - c. Public art (permanent or temporary);
 - d. Educational and interpretive signage and displays;
 - e. Bicycle and pedestrian facilities, including bike racks and bike sharing;
 - f. Scooter and shared micromobility device return areas and corrals;
 - g. Street lighting, street furniture, and fixed or movable seating;
 - h. Guardrails or bollards for safety or security purposes only;
 - i. Any other improvements, facilities, or uses that enhance and activate the public realm and do not directly or permanently prohibit public access or obstruct views; and
 - j. Docked vessels or vessels associated with marinas.
2. New development adjacent to view corridor extensions and walkways shall be sited and designed to minimize adverse impacts on visual access at view corridor extensions or walkways through specific measures, including but not limited to the following:
 - a. No building, associated architectural features, design component, structure, roof projection (e.g., eave, cornice, and eyebrow projections), openly supported architectural projections (e.g., trellis and awnings), bay windows, projecting signs, structural cantilevers, or any other

- associated architectural encroachments or projections shall be permitted within view corridor extensions or walkways;
- b. No mechanical equipment, such as air conditioner units, gas meters, electrical fuse boxes, trash enclosures or dumpsters, utility boxes, or other similar building systems, shall be permitted within view corridor extensions or walkways;
 - c. The placement and design of signs shall be visually compatible and shall not obscure public views; and
 - d. Exterior lighting, where required for security, to serve development, or to provide lighting on a public path, shall be designed with low-intensity fixtures that are shielded and concealed so that light sources are not directly visible from public viewing areas and in accordance with *ECO Goal 1 (Chapter 3.3, Ecology Element)*.
3. Fences or site walls not associated with construction, where located within view corridor extensions and walkways, should be transparent or permeable:
 - a. In locations where solid fences or site walls are used, they shall be no greater than 3 feet in height; and
 - b. Walls and fences shall not limit public access to a view corridor extension or walkway (i.e., shall not include locked gates).
 4. The following requirements apply to parking:
 - a. On-Street parking may be permitted within view corridor extensions and walkways; and
 - b. Underground parking may be located within view corridor extensions and walkways provided it is entirely below grade; no parking ramps shall be permitted in a view corridor extension.
 5. Landscape improvements and trees may be provided and should be selected, sited, and designed through the following techniques:
 - a. Landscaping and trees shall be maintained to minimize view blockage;
 - b. Where new trees are planted or existing trees maintained, the mature tree canopy should begin at a minimum of 8 feet above ground; and
 - c. New plantings, including any associated planter height, shall be 3 feet or less at full maturity except that landscaping used for screening along a leasehold fence may be allowed to grow to a mature height of 5 feet to screen the adjacent property while enhancing the character of the view corridor and in accordance with *ECO Goal 1 (Chapter 3.3, Ecology Element)*.
 6. Solar facilities shall not obstruct or impact views from scenic vista areas or view corridor extensions, or obstruct access to, or along, a pathway.
 7. Telecommunication facilities shall be located and designed to not obstruct or adversely impact views from scenic vista areas or view corridor extensions, or obstruct access to, or along, a pathway.

4.1.4.4 Proposed Scenic Vistas

The proposed PMPU proposes designated scenic vista areas and view corridor extensions within each planning district (the definition of scenic vista areas and view corridor extensions are

summarized in Section 4.1.1.1, *Concepts and Terminology*, above). The following provides the specific locations of these designated scenic areas within each planning district and subdistrict.

Planning District 1: Shelter Island

West Shelter Island Subdistrict

There are seven scenic vista areas proposed in the PMPU in the West Shelter Island Subdistrict (see Chapter 5 of the PMPU for depiction of the scenic vistas). The following are descriptions of the proposed scenic vistas areas that are consistent with the existing designated scenic vistas, and proposed scenic vista areas that are new (not previously identified in the Port Master Plan).

Proposed scenic vista areas consistent with existing:

- Kellogg Beach facing to the southeast, including a view of the Shelter Island peninsula, as well as the open Bay.
- Yokohama Friendship Bell at the southwestern end of the Shelter Island peninsula includes a view of the open water of the Bay, facing south.
- Two along the peninsula facing to the open Bay to the southeast (one was previously identified within the East Harbor Island Subdistrict, but the location and direction of views has not changed).
- Two on the bayfront shoreline facing south, both providing a view of the marinas within the Shelter Island Yacht Basin.

New proposed scenic vista areas:

- Within the Shelter Island Yacht Basin, facing north and providing a view of recreational boat berthing and the bayfront in the Point Loma area.

Three view corridor extensions are proposed in the West Shelter Island Subdistrict along the following roadways:

- McCall Street
- Nichols Street
- Bessemer Street

The McCall and Nichols Streets view corridor extensions provide a view of the marinas within Shelter Island Yacht Basin and the southwestern end of the Shelter Island peninsula. The Bessemer Street view corridor extension provides views of the marinas in the Shelter Island Yacht Basin.

East Shelter Island Subdistrict

Three scenic vista areas are proposed in the East Shelter Island Subdistrict at the following locations.

Proposed scenic vista areas consistent with existing:

- Point Loma Marina Park facing south towards the America's Cup Harbor and the Shelter Island peninsula.

Proposed new scenic vista areas:

- Two at the northeastern portion of the Shelter Island peninsula, both facing north towards the America's Cup Harbor and Point Loma Marina Park.

Two view corridor extensions would be located in the East Shelter Island Subdistrict along the following roadways:

- Dickens Street
- Garrison Street

Both view corridor extensions would face southeast and would provide a view of the marinas in America's Cup Harbor.

Planning District 2: Harbor Island

West Harbor Island Subdistrict

The West Harbor Island Subdistrict contains three proposed scenic vista areas (see Chapter 5.2 in the proposed PMPU). All three areas are located on the south side of the Harbor Island peninsula, one at the westernmost end, one in the center, and one at the southern end of the Harbor Island Drive Entry Segment, all facing south and providing open water views of the Bay. All three of the proposed scenic vista areas are consistent with the existing vista areas designated by the PMP. There are no view corridor extensions proposed for this subdistrict.

East Harbor Island Subdistrict

Two scenic vista areas are proposed for the East Harbor Island Subdistrict at the following locations.

Proposed scenic vista areas consistent with existing:

- Eastern end of Harbor Island peninsula, facing southeast towards a proposed anchorage area and open water views of the Bay with PD3 in the background.

Proposed new scenic vista areas:

- Bayfront shoreline, looking towards the south, providing a view of the East Basin, the Bay, and PD3 in the background.

There are no view corridor extensions proposed for this subdistrict.

Spanish Landing Subdistrict

Three scenic vista areas are proposed for the Spanish Landing Subdistrict.

Proposed scenic vista areas consistent with existing:

- One located at the western end of the subdistrict, facing to the southwest, providing views of the West Basin, the western end of the Harbor Island peninsula, and the open channel and bayfront to the west.
- One at the eastern end of the subdistrict, facing to the southwest, and including a view of the marinas in the West Basin.

Proposed new scenic vista areas:

- One located in the western portion of the subdistrict, south of the terminus of McCain Road, facing to the southwest, providing views of the West Basin, the western end of the Harbor Island peninsula, and the open channel and bayfront to the west.

There are no view corridor extensions proposed for this subdistrict.

Pacific Highway Corridor Subdistrict

There are no scenic vista areas or view corridor extensions proposed in the Pacific Highway Corridor Subdistrict.

Planning District 3: Embarcadero

North Embarcadero Subdistrict

Eight scenic vista areas are proposed in the North Embarcadero Subdistrict (see Chapter 5.3 in the PMPU).

Proposed scenic vista areas consistent with existing:

- Two within the northernmost portion of the subdistrict, situated along the waterside promenade proposed along the bayfront shoreline. One of these is directed to the southeast, capturing views of open water, Grape Street Piers, and Downtown San Diego in the background. The other is facing southwest, capturing views of the Bay.
- Window to the Bay Pier, facing west, which would provide a view of the northern portion of the Bay.
- At the end of Broadway Pier, facing west to capture the view of the open water (the existing vista area is located halfway down Broadway Pier, facing west).
- At the end of the Midway Museum, facing west to capture the view of the open water.

Proposed new scenic vista areas:

- Along the bayfront between West Ash Street and West A Street, which would capture a view to the west of open water of the Bay.
- Along the bayfront between the B Street Pier and Broadway Pier, facing west, and providing a view of both piers as well as the Bay.
- At the end of Navy Pier, facing west to capture the view of the open water.

There are two existing vista areas designated by the PMP that would be removed in the proposed PMPU. They are located along Harbor Drive between West Laurel Street and West Hawthorn Street and provide views to the south and southwest.

View corridor extensions would be located at:

- West Hawthorn Street
- West Grape Street
- West Ash Street

- West A Street
- West B Street
- West C Street
- West Broadway
- West E Street
- West F Street

View corridor extensions at West Hawthorne Street and West Grape Street would face southwest to capture the view of the Bay. All others would face west and capture open water views of the Bay.

Central Embarcadero Subdistrict

The Central Embarcadero Subdistrict would contain four scenic vista areas.

Proposed scenic vista areas consistent with existing:

- G Street Mole, facing west, which would capture views of the Bay.
- Western end of West Harbor Drive, facing west, providing views of Tuna Harbor, the G Street Mole, and the open Bay beyond.
- Between Tuna Harbor and Market Pier, facing southwest, providing views of open water and the Coronado Bayfront across the Bay.

South Embarcadero Subdistrict

Three scenic vista areas are proposed in the South Embarcadero Subdistrict at the following locations.:

Proposed scenic vista areas consistent with existing:

- Along the bayfront adjacent to the SDCC, providing a view of the marina to the southwest.
- At the South Embarcadero Public Access Mole Pier, providing a view to the northwest that would include Embarcadero Marina Park South and the open Bay.

Proposed new scenic vista areas:

- At Embarcadero Marina Park South, facing west, providing a view that would include the open Bay and the Coronado Bayfront.

In addition, five scenic vistas areas are identified within a 5-acre rooftop park for the expanded SDCC. These five scenic vista areas would provide largely uninterrupted panoramic views of the Bay from Point Loma down to the SR-75/San Diego-Coronado Bay Bridge. These scenic vista areas are consistent with the existing PMP.

One view corridor extension would be located at the intersection of East Harbor Drive and Park Boulevard, facing southwest to capture the South Embarcadero Public Access Mole Pier, the Bay, and the Coronado Bayfront.

Planning District 4: Working Waterfront

TAMT Subdistrict

No scenic vista areas or view corridor extensions are proposed for the TAMT Subdistrict, and no vista areas are currently designated by the PMP.

Cesar Chavez Park Subdistrict

Two scenic vista areas are proposed within the Cesar Chavez Park Subdistrict at the locations noted below (see Chapter 5.4 of the PMPU). These would be new scenic vistas areas; no vista areas are currently designated by the PMP in this district.

- In Cesar Chavez Park recreation open space, facing southwest, providing views of the Cesar Chavez Pedestrian Pier, the adjacent working waterfront, the open water of the Bay, and the Coronado Bayfront.
- End of the Cesar Chavez Pedestrian Pier, facing southwest, providing views of the Working Waterfront, the open water of the Bay, and the Coronado Bayfront.

There are no view corridor extensions proposed in this subdistrict.

Harbor Drive Industrial Subdistrict

No scenic vista areas or view corridor extensions are proposed for the Harbor Drive Industrial Subdistrict, and no vista areas are currently designated by the PMP.

Planning District 7: South Bay

No scenic vista areas or view corridor extensions are proposed for the South Bay Planning District, and no vista areas are currently designated by the PMP.

Planning District 8: Imperial Beach Oceanfront

Three scenic vista areas are proposed for the Imperial Beach Oceanfront Planning District, all on the Imperial Beach Pier (see Chapter 5.8 of the PMPU).

Proposed scenic vista areas consistent with existing:

- One at the western end of Imperial Beach Pier facing west, capturing the view of the ocean to the west.
- One in the middle of Imperial Beach Pier facing north, capturing the oceanfront view to the north.

Proposed new scenic vista areas:

- One in the middle of Imperial Beach Pier facing south, capturing the oceanfront to the south.
- Two existing vista areas designated by the PMP located near the eastern end of the Imperial Beach Pier facing north and south that would be removed in the proposed PMPU.

No view corridor extensions are proposed for PD8.

Planning District 9: Silver Strand

State Park Basin Subdistrict

A scenic vista area is proposed at the Crown Cove Aquatic Center, facing east, capturing views of the Bay and the Chula Vista Bayfront across the Bay (see Chapter 5.9 of the PMPU). This would be a new scenic vista area; no vista areas are currently designated by the PMP.

No view corridor extensions are proposed for the State Park Basin Subdistrict.

Crown Isle Subdistrict

No scenic vista areas or view corridor extensions are proposed for the Crown Isle Subdistrict. There are no current designated vista areas.

Grand Caribe Isle and South Cays Subdistrict

Two scenic vista areas are proposed for this subdistrict.

Proposed scenic vista areas consistent with existing:

- Located in Grand Caribe Shoreline Park, facing east to capture views of open water and the Chula Vista Bayfront across the Bay.

Proposed new scenic vista areas:

- Located in the northeast portion of Grand Caribe and captures views of the Bay.

One view corridor extension is proposed in this subdistrict, located on Grand Caribe Causeway, providing views of Grand Caribe Shoreline Park, open water, and the Chula Vista Bayfront.

Planning District 10: Coronado Bayfront

North Coronado Subdistrict

North Coronado Subdistrict would contain three proposed scenic vista areas at the following locations (see Chapter 5.10 of the PMPU).

Proposed scenic vista areas consistent with existing:

- Centennial Park, at the terminus of Orange Avenue, facing northeast, capturing views of the Ferry Landing, open water of the Bay, and PD3.

Proposed new scenic vista areas:

- In the southern portion of the subdistrict, at the base of the Coronado Bridge in Tidelands Park, providing views to the east, including open water of the Bay, the SR-75/San Diego-Coronado Bay Bridge, and PD4.
- West of Centennial Park, providing views to the northeast across the open water of the Bay and PD3.

There are four existing vista areas designated by the PMP that would be removed in the proposed PMPU:

- At the northern terminus of C Avenue, facing northwest.
- At the northern terminus of B Avenue, facing northwest.
- At the eastern terminus of 2nd Street, facing southeast.
- At the eastern terminus of 3rd Street, facing southeast.

The North Coronado Subdistrict would contain five proposed view corridor extensions .

- Orange Avenue
- C Avenue
- B Avenue
- 2nd Street
- 3rd Street

The Orange Avenue, C Avenue, and B Avenue view corridor extensions provide views of the Ferry Landing, open water of the Bay, and PD3. The 2nd Street and 3rd Street view corridor extensions provide views to the southeast of the SR-75/San Diego-Coronado Bay Bridge, open water of the Bay, and PD4.

South Coronado Subdistrict

This subdistrict would include one scenic vista area located in the northwestern corner of Glorietta Bay and is oriented in a southerly direction. There are no existing vista areas in this subdistrict designated by the PMP; thus, the proposed scenic vista area would be new. This view primarily consists of the recreational boat marinas and the small area of open water within Glorietta Bay .

No view corridor extensions are proposed for the South Coronado Subdistrict.

4.1.4.5 Project Impacts and Mitigation Measures

Threshold 1: Have a substantial adverse effect on a scenic vista?

Impact Analysis

Impacts of Water and Land Uses

Construction

The proposed PMPU would not directly result in the construction of any specific development projects or improvements, but it would guide and allow, subject to issuance of Coastal Development Permits or Coastal Act exclusions, future development consistent with the proposed water and land use designations, policies, and Development Standards set forth by the proposed PMPU. Chapter 3, *Project Description*, provides a complete list of the water and land uses and future development allowed in PD1, PD2, PD3, PD4, a portion of PD7, PD8, PD9, and PD10. Construction activities associated with future development has the potential to occur within the viewsheds of the scenic vista areas or view corridor extensions identified under Section 4.1.4.4, *Proposed Scenic Vistas*.

Although development consistent with the proposed water and land uses of the proposed PMPU may be proposed at some future date, no planned improvements are projected for PD7 and no scenic vistas or view corridor extensions are proposed.

Future development within PD1, PD4, PD8, and PD9 would primarily involve roadway improvements within limited segments of roadway, installation of mobility hubs, and installation of new berthing slips for recreational boats or commercial fishing or sportfishing vessels, and anchorage moorings. These future developments would involve use of standard construction equipment for demolition, grading, and site preparation for roadway improvements and mobility hubs. However, replacement of existing buildings, such as hotels, retail uses, and restaurants, would likely occur at some point in the future. Moreover, construction of future development projects associated with allowable water and land uses would be the most intense in PD2 and PD3, and would include new hotels, restaurants, and retail uses.

Future development within these planning districts would involve the use of standard construction equipment for demolition, grading, site preparation, and construction of new structures. Construction equipment may temporarily block partial access to, or partial views from, designated scenic vistas or view corridor extensions. While the majority of the scenic vistas or view corridor extensions are situated on the shoreline and directed towards the water to primarily provide a view of open water, construction may still partially block the views of certain scenic vistas or view corridor extensions. Additionally, the placement of equipment or certain activities may block access to a designated scenic vista area, thereby temporarily diminishing its value. In-water construction associated with water use designations (i.e., piers, moorings, etc.) may require the use of construction equipment such as in-water cranes or barges. Such equipment could block the middleground or background of views provided by the scenic vista areas along the shoreline.

The existence of construction equipment presents short-term visual changes that are common in urban settings, and, in particular, in the City of San Diego. In addition, construction sites tend to be limited to individual parcels and generally would not wall off extended lengths of the PMPU area along the bayfront, where most scenic vista areas are located. However, it is possible larger equipment could potentially encroach into the views of a scenic vista or view corridor for a substantial amount of time. At the time of the preparation of this PEIR, the location, duration, and type of construction is unknown; thus, it cannot be guaranteed that construction equipment would not substantially block views, or block access to scenic vistas or view corridors. Therefore, impacts from both landside and in-water construction activities that might partially obstruct a scenic vista would be significant (**Impact-AES-1**) prior to mitigation. Project proponents of future development projects would be required to submit a construction schedule for review and approval by the District to reduce potential conflicts with scenic views (**MM-AES-1**).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to scenic vistas during construction activities (**Impact-AES-1**).

Construction activities associated with Option 1 would occur in the vicinity of several of the view corridor extensions identified for the North Embarcadero Subdistrict, and construction equipment could result in the temporary interference with views from, or temporarily prevent access to, a view corridor extension. However, construction activities under Option 1 would not require the use of in-water construction equipment and it is not anticipated that the use of cranes would be required. Therefore, construction activities under Option 1 would not result in any additional or more severe impacts related to scenic vistas than buildout of the proposed PMPU under Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to scenic vistas during construction activities (**Impact-AES-1**).

Construction activities associated with Option 2 would occur within the vicinity of several of the view corridor extensions identified for the North Embarcadero Subdistrict, and construction equipment could result in the temporary interference with views from, or temporarily prevent access to, a view corridor extension. However, construction activities under Option 2 would not require the use of in-water construction equipment and it is not anticipated that the use of cranes would be required. Therefore, construction activities under Option 2 would not result in any additional or more severe impacts related to scenic vistas than buildout of the proposed PMPU under Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to scenic vistas during construction activities (**Impact-AES-1**).

Construction activities associated with Option 3 would occur within the vicinity of several of the view corridor extensions identified for the North Embarcadero Subdistrict, and construction equipment could result in the temporary interference with views from, or temporarily prevent access to, a view corridor extension. However, construction activities under Option 3 would not require the use of in-water construction equipment and it is not anticipated that the use of cranes would be required. Therefore, construction activities under Option 3 would not result in any additional or more severe impacts related to scenic vistas than buildout of the proposed PMPU under Option 3.

Operation***Planning District 1: Shelter Island******West Shelter Island Subdistrict***

As discussed above in Section 4.1.4.4, there are seven scenic vista areas and three view corridor extensions identified for West Shelter Island. Four of the scenic vista areas and all of the view corridor extensions are located within the landside segment of West Shelter Island and look out

over the Shelter Island Yacht Basin with the exception of the scenic vista at Kellogg Beach, which is oriented toward the tip of the island segment of West Shelter Island and the open Bay. The remaining scenic vista areas are located along the island segment and look out into the open Bay. Future development within West Shelter Island would not include any landside development that would permanently block or adversely affect the viewshed of the scenic vista areas or the view corridor extensions identified above for the West Shelter Island Subdistrict.

Landside planned improvements would be limited to mobility hubs, including one connector mobility hub and one local gateway hub that are located adjacent to two of the scenic vista areas. In addition, roadway improvements are planned along the entry segment of Shelter Island Drive to enhance the public realm with signage, narrowing travel lanes, reconfigured parking, and expanded open space. Pedestrian crossings and improvements to La Playa Trail are also identified in the proposed PMPU, which would also occur near the identified scenic vistas. All of these improvements would involve low-profile features that would not introduce a structure with substantial massing, or other view-blocking features, into a viewshed of the scenic vista or view corridor extensions within West Shelter Island. While a small-scale restaurant or coffee shop would be permitted at a local mobility hub, the baywide development standards listed in Chapter 4 of the proposed PMPU identify features that are and are not allowed within scenic vista areas, including, among other standards, that no development should obstruct a designated scenic vista or view corridor extensions. Per PMPU Section 4.4 (View Standards) in Chapter 4 of the draft PMPU, structures (e.g., a coffee shop) would not be permitted features within a scenic vista area, view corridor extension, or walkway. PMPU Section 4.4.3, Standards for View Protection 2, states that no building, or any component of a building, is permitted within view corridor extensions or walkways and requires siting design to minimize adverse impacts on visual access at view corridor extensions. Such standards would be enforced as part of the District's CDP process described in Section 4.1.3, *Laws, Regulations, Plans, and Policies*, above. Adherence to these development standards would ensure that views from these resources are protected.

Waterside planned improvements could involve up to 10 additional anchorage moorings within the viewshed of the scenic vistas identified along the island segment that look out into the open Bay. However, none of the anchorages are located directly in front of the scenic vista areas, and moorings are spread out from each other and do not result in the dense concentration of tightly packed boats that occurs at marinas. This would allow for views through any moored vessels and would not result in a substantial adverse effect on a scenic vista.

Based on the above, neither the landside nor waterside improvements that could occur within West Shelter Island would result in substantial adverse effects on scenic vistas, and impacts are considered less than significant.

East Shelter Island Subdistrict

East Shelter Island contains three scenic vista areas and two view corridor extensions, all of which look into the America's Cup Harbor (see Section 4.1.4.4). Similar to West Shelter Island, future development within East Shelter Island would not include any landside development that would permanently block or adversely affect views provided by the scenic vista areas or the view corridor extensions. Potential landside development would be limited to one connector mobility hub and roadway modifications to accommodate multi-modal opportunities, pedestrian crossings, or multi-use paths. All of these improvements would involve low-profile features that would not introduce a structure with substantial massing, or other view-blocking features, into a viewshed of a scenic

vista or view corridor extensions. Adherence to the development standards identified in Chapter 4 of the proposed PMPU and detailed above would ensure that views from these resources are protected.

In addition, development of an additional 20 moorings, 65 commercial fishing berthing slips, and 35 recreational berthing slips would be allowed under the proposed PMPU. However, views from the scenic vistas and view corridor extensions are largely dominated with foreground views of fishing berthing and recreational boat marinas under existing conditions and, due to the already dense concentration of vessels within the foreground views, the addition of 35 additional boat slips would not result in a discernible difference within these views. In addition, per PMPU Section 4.4.3, *Standards for View Protection*, docked vessels or vessels associated with marinas are features that may be located within scenic vista areas and view corridor extensions. The additional moorings would be located within the middle of the America's Cup Harbor; however, as noted above, due to the dense concentration of berthed fishing and recreational boats within the foreground views of the scenic vistas, additional moorings within the harbor would not be discernible from the scenic vistas. As moorings and berthing slips would be consistent with the uses currently located in these areas, including marinas and anchorages, and would be consistent with the visual characteristics of the views of this area, which feature piers and docked vessels, these features are expected elements within bayfront views. Therefore, additional water uses would not adversely affect existing or proposed scenic vista areas or view corridor extensions. Impacts are considered less than significant.

Planning District 2: Harbor Island

West Harbor Island Subdistrict

As noted in Section 4.1.4.4, West Harbor Island includes three scenic vista areas located along the south side of the island segment looking outwards toward the Bay. Future landside development in the West Harbor Island Subdistrict could include additional hotel rooms, and new retail/restaurant space. The development would occur on the west side of the Harbor Island peninsula and the entryway to the peninsula. Additional future improvements for this subdistrict include a Local Gateway Mobility Hub located at Harbor Island Park, which would be an expansion of the existing transportation facilities, and a water-based transfer point. The local mobility hub would include facilities such as access points to bicycle and pedestrian routes, micro-mobility facilities, and access to parking, which are all consistent with transit-related facilities currently available in the subdistrict. Per the Baywide Development Standards (Chapter 4 of the draft PMPU), mobility hubs would be set back away from the water's edge and would not fall within the viewshed of any scenic vista. Per PMPU Section 4.4.3, *Standards for View Protection*, none of the future development described above would be visible from the scenic vistas within West Harbor Island; however, these landside planned improvements may be visible from the viewsheds of the scenic vista areas proposed in the Spanish Landing Subdistrict. Middleground and foreground views available from the Spanish Landing scenic vistas include narrow segments of open water and the recreational boat marinas located within West Basin, and background views include the taller buildings along the island segment of West Harbor Island. Building standards for the West Harbor Island Subdistrict allow building heights of 160 feet, which is similar to the existing Sheraton San Diego Hotel & Marina, and would require a 10- to 15-foot-wide building setback between all waterside promenades and landside development, consistent with current development. The building standards also provide requirements for orientation of buildings, and location and configuration of

public parking. As such, new development within West Harbor Island could include tall buildings, similar in height to the existing hotels. Due to the distance and intervening features, such as the marinas, new development within West Harbor Island would become part of the background views available from the Spanish Landing scenic vista areas and would not obstruct or otherwise adversely affect these scenic vistas. In addition, the proposed types of land uses are consistent with the existing uses, would be an expansion of the existing types of development present on the Harbor Island peninsula, and would be of a similar size and scale as the existing development. Furthermore, future development would be required to adhere to the development standards for scenic vistas and view corridor extensions specific to West Harbor Island Subdistrict, as well as the development standards identified in Chapter 4 of the proposed PMPU, which establish siting and design requirements to minimize obstruction of scenic vistas and view corridor extension, including prohibiting development from obstructing designated scenic vista areas. Such standards would be enforced as part of the District's CDP process.

Future waterside development in the West Harbor Island Subdistrict could include up to 165 new recreational boat berthing slips in the West Basin. The length and width of recreational boat slips vary, but for the purposes of this analysis, an average slip size of 35 feet long by 12 feet wide was assumed. These slips would be added within existing marinas and would be consistent with the current view of piers, slips, and recreational boats in the West Basin. Furthermore, these features are expected elements within bayfront views and are allowed by the PMPU Standards for View Protection. As WLU Policy 3.2.1 states, all visual access locations, including scenic vista areas, view corridor extensions, Window to the Bay, etc., shall be maintained and protected. Lastly, there would be no future development within the viewsheds of the scenic vistas identified along the island segment of West Harbor Island. Therefore, water-based planned improvements would not result in significant adverse effects on scenic vista areas or view corridor extensions in the West Harbor Island Subdistrict.

East Harbor Island Subdistrict

Two scenic vista areas are proposed within the East Harbor Island Subdistrict, both facing south-southeast, towards the open water of the Bay and towards the North Embarcadero Subdistrict. No view corridor extensions are proposed within the East Harbor Island Subdistrict. Land-based planned improvements within the East Harbor Island Subdistrict would involve similar uses and intensity as those that could occur on West Harbor Island, including up to 1,360 new hotel rooms, up to 40,000 square feet of meeting space, and up to 92,500 square feet of new retail/restaurant uses (within hotels and stand-alone). However, these future improvements would be set back from the waterfront and would not occur in the viewsheds of the two scenic vista areas and, as such, would not affect these scenic vistas. Future water-based development for this subdistrict could include up to 60 additional recreational boating slips and up to five additional moorings. The additional moorings would occur within the viewsheds of both scenic vista areas. However, additional moorings would be located in an area currently populated by recreation vessels and anchorage facilities, and moorings are spaced apart from each other and allow views to continue through the anchorage. In addition, recreational boats are an expected component within viewsheds of the Bay and would be consistent with the Standards for View Protection (Section 4.4.3 of the proposed PMPU):

View Protection Standard 1. "The following features may be located within scenic vista areas, view corridor extensions, and walkways:

- j. Docked vessels or vessels associated with marinas."

Therefore, additional recreational boat slips would be consistent with existing conditions and would not conflict with the character of the viewsheds of the two proposed scenic vista areas.

Future improvements in the North Embarcadero Subdistrict (described further below) could include additional hotel rooms, meeting space, retail/restaurant space, visitor-serving marine terminal uses, moorings, and recreational boat berthing slips that may be visible from the scenic vista areas within the East Harbor Island Subdistrict. However, future development within the subdistrict would be similar in size and scale to the existing development visible from the Harbor Island East scenic vistas. Given the distance and similarity in size and scale, future development within the North Embarcadero Subdistrict would blend with its surrounding context and would not adversely affect the Harbor Island East scenic vistas. As required by the proposed development standards and policies, including but not limited to PMPU WLU Policies 2.2.2, 2.2.3, 3.2.1, 3.2.2, 3.2.3, 3.2.4, and 3.2.5 described above, future development within PD3 would maintain the visual characteristics of the subdistrict. Additionally, building standards specific to the North Embarcadero Subdistrict would limit the height of buildings based on the city blocks in which they are located, would apply building and upper story setbacks, and would include requirements for building frontages. Such standards would be enforced as part of the District's CDP process described in Section 4.1.3. Because development in the North Embarcadero would be in the background of the viewsheds of the two scenic vista areas, and would match the visual character of the surrounding development, it would not result in significant adverse effects on the designated scenic vistas.

Spanish Landing Subdistrict

Future development in this subdistrict could include an additional 90,000 square feet of standalone retail/restaurant, as well as roadway modifications and development of a multi-use path to connect Spanish Landing Park to Shelter Island. While roadway modifications and a multi-use path would only involve low-profile development that would be minimally visible within scenic vistas, development of retail/restaurant uses would involve a more substantial structure. However, this potential future development would be set back from the waterfront away from the location and outside of the viewsheds identified for this subdistrict, consistent with PMPU WLU Policy 3.2.5. Therefore, the additional retail/restaurant space would not result in any obstructions to the proposed scenic vistas. Additionally, as noted above, West Harbor Island could include up to 165 new recreational boat berthing slips. Based on the average slip size of 35 feet long by 12 feet wide, the 165 recreational boat slips could cover up to approximately 1.6 acres of open water if they were built consecutively and these would be visible from scenic vistas in the Spanish Landing Subdistrict. These additional recreational boat berthing slips could be developed in the existing marinas where there are existing recreational boat berthing slips or in the open water along the shoreline at the eastern end of the Spanish Landing Subdistrict. Although the proposed berthing slips could occupy previously open water, this area already contains a dense concentration of recreational boat slips and is currently very active with boat traffic and marina activity. As discussed, these uses would be expected components within views of the West Basin, would be visually cohesive with the surrounding marinas, and are allowed uses within scenic vista areas per View Protection Standard 1j (see Section 4.4.3 of Chapter 4, *Baywide Development Standards*, of the draft PMPU). In addition, WLU Policy 3.2.1 states that all visual access locations, including scenic vista areas, view corridor extensions, Window to the Bay, etc., shall be maintained and protected. Such standards would be enforced as part of the District's CDP process described in Section 4.1.3 above. Therefore, implementation of the proposed PMPU would not result in a significant adverse effect on scenic vistas from Spanish Landing.

Pacific Highway Corridor Subdistrict

There are no scenic vista areas or view corridor extensions proposed in this subdistrict, nor are there any scenic vistas that would include this subdistrict within the viewshed.

Planning District 3: Embarcadero

North Embarcadero Subdistrict

Future development in the North Embarcadero Subdistrict could include up to 750 additional hotel rooms, additional new retail/restaurant and meeting space, new anchorage moorings, and new recreational boat berthing slips. Because seven of the eight scenic vista areas abut and face the Bay to capture views of the open water, land-based development would not encroach in the viewsheds, and therefore would not affect these seven scenic vista areas. The northernmost scenic vista area is located on the border of PD2 and PD3, and is facing southeast. This view captures the boat anchorage in the foreground, North Embarcadero Subdistrict in the middleground, and Downtown San Diego in the background. Land-based future development associated with the Commercial Recreation land use designation, including hotels and retail/restaurant space, within North Embarcadero could be visible from this scenic vista area, but because the view is distant, future development would not be a main feature of the view. Additionally, the potential development would be consistent with the existing uses in the subdistrict, and future development would be compliant with baywide and subdistrict-specific development standards, which establish the appropriate size, location, and orientation of future development, including buildings, structures, and public realm features (Chapter 5.3, Section 5.3.2[D], *Development Standards*, of the proposed PMPU). Two mobility hubs are proposed for the North Embarcadero Subdistrict. However, they would be in areas already containing similar transportation infrastructure, such as water-based transfer points and transit stops, so mobility hub-related development would be consistent with the existing setting. There are nine view corridor extensions proposed in North Embarcadero Subdistrict, and as established by View Protection Standards 1 and 2a and WLU Policy 3.2.2 of the proposed PMPU, all components of any building would be designed and sited to avoid intrusion into the scenic vista area (Section 4.4.3, *Standards for View Protection*, of the proposed PMPU). View corridor extensions are located within road right-of-way, and all adjacent development would be required to comply with baywide development standards, including View Protection Standards 1 and 2. These standards would ensure architecture and development features would not extend into the right-of-way of the view corridor, and signs and outdoor lighting would be sited appropriately so they would not interfere with the view provided by the view corridor extension. Therefore, land-based, future development would not adversely affect the designated scenic vista areas or view corridor extensions.

Water-based development would include new piers, moorings, and recreational boat berthing, which could be developed in the Bay adjacent to several scenic vista areas. The additional moorings would be allowed in the northernmost portion of the waterside of the subdistrict, where the existing use is an anchorage. Additional recreational boat berthing slips would be allowed in the waterside area between Grape Street Pier and B Street Pier, but this would represent a small fraction of the over 50 acres of open water present between Grape Street Pier and B Street Pier. This area is home to the San Diego Maritime Museum, which hosts museum vessels and the B Street Pier, which is a cruise ship terminal, and is a very active area of the Bay with substantial vessel traffic. Thus, this area is currently dominated by the view of different sized vessels, and the addition of recreational boat slips would not block a scenic vista or represent a significant change in the visual experience of

viewers in this area. In addition, as noted above, docked vessels are features that may be located with a scenic vista area, per View Protection Standard 1. Thus, the water-based development assumptions would not result in significant adverse effects on the scenic vista areas in this subdistrict.

Central Embarcadero Subdistrict

The three scenic vista areas proposed for the Central Embarcadero Subdistrict face west, towards the open water. One scenic vista area, located at Tuna Harbor, captures a view of the G Street Mole, currently developed with retail/restaurant space, an open space park, and surface parking lots. The other two scenic vista areas include views of open water, and the Coronado Bayfront across the Bay. Potential future development for this subdistrict could include redevelopment of the existing restaurant and reconfiguration of North Harbor Drive/West Harbor Drive. Potential landside development within the G Street Mole area could include redevelopment of the existing two-story visitor-serving facility, which would be visible within the scenic vista area, but would be consistent with the current use, size, and scale, and would comply with all applicable baywide development standards identified in Chapter 4 of the proposed PMPU. This includes PMPU WLU Policies 2.2.2, 2.2.3, 3.2.1, 3.2.2, 3.2.3, 3.2.4, and 3.2.5 described above. All future development within the G Street Mole would also comply with the proposed building standards for Central Embarcadero Subdistrict, which limit the height of structures to 45 feet, and require that the scenic vista areas be preserved (see View Protection Standards 1 and 2 in Section 4.4.3, *Standards for View Protection*, of the proposed PMPU). Such standards would be enforced as part of the District's CDP process described in Section 4.1.3, above. Roadway improvements would be low-profile and would not occur within the proposed scenic vistas' viewsheds. While improvements within the North Coronado Bayfront Subdistrict within PD10 would be visible from these scenic vistas, this subdistrict would not include any landside development and future waterside development would only involve the addition of anchorage moorings. Given the distance from the Central Embarcadero Subdistrict and the diminutive scale of this type of development, new anchorage moorings would not introduce a feature into these scenic vistas that could block, substantially interfere with, or otherwise result in a significant adverse effect on a scenic vista area.

South Embarcadero Subdistrict

Future landside development allowed under the proposed PMPU in this subdistrict includes up to an additional 100 hotel rooms and up to 2,500 square feet of retail space, the development of a mobility hub, and a number of roadway improvements. The development would primarily occur as redevelopment of existing uses within the Commercial Recreation designation, as the majority of this subdistrict is built out or entitled. Of the three scenic vista areas in this subdistrict, two would have views of the open water of the Bay and PD10 across the Bay, and two would have views that include EMPN and EMPS. Both of these park areas are designated as Recreation Open Space, thus would not be the location of hotel, meeting space, or retail/restaurant uses. In addition, the proposed Convention Center expansion would provide an additional five scenic vistas that would be located on a rooftop park within that development. These five vistas would provide largely uninterrupted panoramic views that look out over the existing large vessel (super-yachts) marina, EMPS, the open water of the Bay, the northern shoreline of PD10, and TAMT. Views of the San Diego-Coronado Bay Bridge would also be available from this rooftop park. Combined with its elevated position, these scenic vistas would remain unobstructed under implementation of the proposed PMPU. All future development under the proposed PMPU would be required to comply with

Standards for View Protection 1 and 2a through 2j and WLU Policy 3.2.1 of the PMPU, which require maintenance and protection of scenic vista areas, view corridor extensions, Window to the Bay, and walkways, to ensure protection of designated scenic vistas and view corridor extensions. Baywide development standards would also ensure future development would not intrude in the public right-of-way of the proposed view corridor extension at the southern end of the South Embarcadero Subdistrict. While the scenic vistas areas offer views of PD10 across the Bay, no landside development is assumed in PD10. Therefore, future landslide improvements within this subdistrict would not result in significant adverse effects on scenic vistas or view corridor extensions.

Waterside development assumptions for the South Embarcadero Subdistrict include up to 65 additional recreational boat berthing slips, which would occur within the existing marinas between the shore and EMPN and EMPS, an area that totals approximately 34 acres. Approximately 8.21 acres of this area is open water; however, due to the number of vessels, the area is very active with vessel traffic. The added slips in the existing marinas would be consistent with the existing characteristics of the view.

Several scenic vista areas include background views of the North Coronado Subdistrict in PD10, which could include future waterside development of additional moorings. These would be located in an area already developed as an anchorage. Ten additional moorings would not be a substantial increase in moorings, and, given the distance of the view, the additional moorings would not result in a material change in the view of PD10. Therefore, future waterside development would not result in significant adverse effects on scenic vistas.

Planning District 4: Working Waterfront

TAMT Subdistrict

No scenic vistas or view corridor extensions are designated in this subdistrict, and planned improvements proposed by the proposed PMPU for this subdistrict would not affect any proposed scenic vistas elsewhere in the proposed PMPU area.

Cesar Chavez Park Subdistrict

There are two scenic vista areas in this subdistrict, facing west, towards the open water of the Bay and PD10's South Coronado Subdistrict, and there are no proposed view corridor extensions. Future development for this subdistrict could include modifications to Cesar Chavez Parkway and improvements to existing pathways in Cesar Chavez Park and do not include any land- or water-based development within the viewshed of either of the scenic vista areas. The background of both viewsheds includes the South Coronado Subdistrict of PD10, where future development may include additional moorings and recreational boat berthing. The additional moorings and slips would allow for more vessels within areas already used for recreational boating and boat storage, and would be consistent with the background views of these areas from the two scenic vista areas. Therefore, there would not be any significant adverse effects on the scenic vistas.

Harbor Drive Industrial Subdistrict

No scenic vistas or view corridor extensions are designated in this subdistrict, and future development allowed under the proposed PMPU for this subdistrict would not significantly affect any proposed scenic vistas elsewhere in the proposed PMPU area.

Planning District 7: South Bay

There are no scenic vista areas or view corridor extensions proposed for this planning district, nor is any potential development identified for PD7 in the proposed PMPU; therefore, the proposed PMPU would not result in significant adverse effects on a scenic vista in this planning district.

Planning District 8: Imperial Beach Oceanfront

Three scenic vista areas are proposed for PD8, all located on the Imperial Beach Pier, capturing views of the oceanfront to the north and south, and the open ocean to the west. The future development could include an increase in retail/restaurant space of up to 18,000 additional square feet and the modification or reconstruction of the existing retail and visitor-serving facilities in this planning district, along Elkwood Avenue and Palm Avenue, and an increase of the existing pier building by up to 3,000 square feet. The Elkwood Avenue and Palm Avenue parcels currently contain parking lots, and future development of retail/restaurant uses at these parcels would involve the addition of structures that may be peripherally visible from the two scenic vistas that face north and south along the Imperial Beach Pier. However, Development Standard PD8.14 restricts building heights to 30 feet within PD8, which would involve buildings with a maximum of two stories in an area where a relatively dense development pattern exists of structures ranging in height from one to four stories. Given the distance of the Palm Avenue parcel from the scenic vista on the pier and intervening development, including four-story multi-family residential buildings, any development at Palm Avenue would either not be visible or would barely be visible from this scenic vista and would not result in any adverse impacts on this vista. Similarly, while the Elkwood Avenue parcel is closer to the pier, future development at this parcel would be situated behind two- to three-story-tall residential structures located along the beachfront, and this scenic vista would not be affected by future development at this parcel. The third scenic vista at the end of the pier is oriented west looking out over open views of the ocean. The addition of 3,000 square feet of retail/restaurant uses at the end of the pier has the potential to interfere with access to this scenic vista; however, per Planned Improvement PD8.7, contiguous coastal access is to be maintained along the perimeter of the pier, and as such, the scenic vista area, which is located on the western side of the existing restaurant would be preserved. There are no view corridor extensions proposed in PD8. Therefore, the future potential development would not result in significant adverse effects on the proposed scenic vista areas.

Planning District 9: Silver Strand***State Park Basin Subdistrict***

Future development allowed under the proposed PMPU in this subdistrict includes up to five new moorings in the northernmost portion of the subdistrict, but does not include any landside development. The scenic vista area in this subdistrict captures views of Crown Cove and the Bay; the anchorage with the proposed additional moorings would be in the northernmost portion of the viewshed, approximately 1,800 feet from the scenic vista. Thus, the additional moorings would not represent a main feature of the view and would take up a very small part of the open water views provided by the scenic vista area. Additionally, there are no proposed view corridor extensions in this subdistrict. Therefore, the proposed planned improvements would not result in significant adverse effects on the designated scenic vistas.

Crown Isle Subdistrict

No scenic vistas or view corridor extensions are designated in this subdistrict and the future development allowed under the proposed PMPU in this subdistrict could include development of a Connector Mobility Hub and up to 10 additional recreational boat berthing slips, which would be allowed within the existing marina areas. These 10 additional recreational boat berthing slips would cover approximately 4,200 square feet. The future development would not be visible from and would not interfere with scenic vistas proposed elsewhere within the proposed PMPU area; therefore, impacts would be less than significant.

Grand Caribe Isle and South Cays Subdistrict

Two scenic vista areas and one view corridor extension are proposed in this subdistrict. Future improvements would involve expansion of the Grand Caribe Shoreline Park, development of a water-based transfer point, and up to 10 additional recreational boat berthing slips. None of these planned improvements would occur within the viewshed of these vistas; therefore, there would be no adverse effects on the scenic vista areas. Future development along the proposed view corridor extension would be required to comply with baywide development standards protecting views; these would ensure that architecture and development features would not extend into the right-of-way of the view corridor, and signs and outdoor lighting would be required to be sited appropriately so they would not interfere with the view provided by the view corridor extension. Therefore, no significant adverse effects would occur on the proposed view corridor extension.

Planning District 10: Coronado Bayfront*North Coronado Subdistrict*

The scenic vista areas and view corridor extensions in this subdistrict face towards the open water and capture views of the Bay and background views of PD3, PD4, and Downtown San Diego. Future landside improvements could include development of a Local Gateway Mobility Hub, which would be located near the waterfront in the vicinity of the C and B Avenue termini. This mobility hub would be situated farther inland and south of the scenic vistas designated along the waterfront near the end of Orange and D Avenues, and would not be visible within the viewshed of the scenic vista areas. However, there are three proposed view corridor extensions in the vicinity of the proposed Local Gateway Mobility Hub. Future development of a mobility hub along the proposed view corridor extension would be required to comply with baywide development standards proposed as part of the proposed PMPU (see Section 4.1.4.3. *Policies that May Avoid or Reduce Impacts*, above, and Chapter 4 of the proposed PMPU) that establish requirements for protecting views. The baywide development standards for view protection would ensure architecture and development features would not extend into the right-of-way of the view corridor, and wayfinding signs and outdoor lighting would be sited appropriately so they would not interfere with the view provided by the view corridor extension. In addition, PMPU View Protection Standard 2 prohibits any component of a building to encroach into view corridor extensions. These standards would ensure that the mobility hub would not result in significant adverse effects on the view corridor extensions.

Future waterside development in this subdistrict could include the addition of 20 moorings at the existing anchorage located approximately 1,000 feet from Tidelands Park and would fall within the viewshed available from the scenic vista at the southeast corner of Tidelands Park. This scenic vista area includes views of open water in the foreground, the existing anchorage and the SR-75/San Diego-Coronado Bay Bridge in midground views, and the Working Waterfront in the background.

The addition of moorings within this viewshed would be consistent with the existing uses within the Bay and would be expected components within these viewsheds. Views of the open water in the foreground would be maintained given the distance between the scenic vista and the anchorage, and, because moorings are spread farther apart than recreational boating slips in a marina (which result in a dense concentration of boats), views of the bridge and working waterfront beyond are retained through moored vessels.

The PMPU would allow future development within PD3 that could be visible in background views of the scenic vista areas; however, this development would be consistent with the existing visitor-serving uses of the planning districts. Future development in PD3 would conform to the style and the character of the views of the Downtown waterfront because all future development would be required to comply with the baywide development standards and the Embarcadero Planning District building standards, which set height and setback limits, and require the protection of scenic vista areas and view corridors. Compliance with these development standards would ensure that future development under the proposed PMPU would blend with, and would not block, the background views of the Downtown skyline in the distance. Therefore, future development allowed under the proposed PMPU would not result in significant adverse effects on the scenic vista areas or view corridor extensions.

South Coronado Subdistrict

A scenic vista area is situated within the northern corner of Glorietta Bay and is oriented in a southwesterly direction into Glorietta Bay. Foreground views are dominated by a dense concentration of recreational boats docked at the existing marina. Midground views include intermittent glimpses of open water in the middle of Glorietta Bay, and background views include the 10 high-rise buildings comprising the Coronado Shores condominium complex along Silver Strand Boulevard. The potential increase of up to 25 moorings at the existing anchorages would not be prominently visible from this scenic vista due to the existing marinas and the fact that the anchorage is located to the east and is not highly visible. The additional recreational boat berthing slips could add up to 55 more slips to a viewshed of a mostly enclosed water body already occupied with piers and vessels. The water along the shoreline of Glorietta Bay is dominated by piers for recreational boat berthing, with open water in the middle of the enclosed water body that is frequented by boat traffic. The additional slips would be allowed within the area already dominated by marinas, and moorings would be allowed in the existing anchorage currently populated by moored vessels. Therefore, the additional moorings and recreational berthing slips would not result in a material change to the views of the open water in the middle of Glorietta Bay or the marinas along the shoreline. In addition, PMPU Standard for View Protection 1j identifies docked vessels as an allowable feature within the viewshed of a scenic vista. Based on the above, future development occurring under the proposed PMPU would not result in a significant adverse effect on a scenic vista.

There are no proposed view corridor extensions within the South Coronado Subdistrict. Therefore, the proposed PMPU would not result in significant adverse effects on the scenic vista area or view corridor extensions.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU

land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU during the operational phasing, including within PD3, would result in a less-than-significant impact related to scenic vistas.

The new Waterfront Destination Park that could be developed under Option 1 would be within the North Embarcadero Subdistrict. All scenic vista areas and view corridor extensions are located along or within a block of the waterfront and are oriented westward. While the new Waterfront Destination Park would abut the bayfront, Option 1 would not include any components that would have the potential to block or obstruct the viewshed of any scenic vistas or view corridor extensions during operations. It is anticipated that the new Waterfront Destination Park that could be developed under Option 1 would be similar to other parks within the proposed PMPU area, and therefore would not contain any large structures that could result in a substantial adverse effect on a scenic vista. Consequently, operations under Option 1 would not result in any additional or more severe impacts related to scenic vistas than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU during the operational phasing, including within PD3, would result in less-than-significant impacts related to scenic vistas.

The expanded Recreation Open Space that could be developed under Option 2 would be within the North Embarcadero Subdistrict. All scenic vista areas and view corridor extensions are located along or within a block of the waterfront and are oriented westward. Option 2 would not include any components that would have the potential to block or obstruct the viewshed of any scenic vistas or view corridor extensions during operations. Any new park space developed under Option 2 would be situated eastward of, and would not be within the viewshed of, any scenic vistas or view corridor extensions. Therefore, operations under Option 2 would not result in any additional or more severe impacts related to scenic vistas than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU during the operational phasing, including within PD3, would result in less-than-significant impacts related to scenic vistas.

New park space that could be developed under Option 3 would be within the North Embarcadero Subdistrict. All scenic vista areas and view corridor extensions are located along or within a block of the waterfront and are oriented westward. Option 3 would not include any components that would have the potential to block or obstruct the viewshed of any scenic vistas or view corridor extensions during operations. Any new park space developed under Option 3 would be situated eastward of, and would not be within the viewshed of, any scenic vistas or view corridor extensions. Therefore, operations under Option 3 would not result in any additional or more severe impacts related to scenic vistas than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies identified in Section 4.1.4.3 would not result in substantial adverse effects on scenic vistas within the proposed PMPU area. Although future development or modification of structures or buildings that may occur under the proposed PMPU could be located within scenic views, the implementation of WLU Policy 3.2.1., which would require that scenic vista areas, view corridor extensions, Window to the Bay, and walkways would be maintained and protected, would ensure future development would not block or adversely affect the designated scenic views of the proposed PMPU.

Impact Determination and Mitigation

Implementation of the proposed PMPU would have substantial adverse effects on scenic vistas.

Significant Impacts

Impact-AES-1: Potential to Interfere with Designated Scenic Vista Areas or View Corridors During Construction Associated with Implementation of the Proposed PMPU. Construction activities associated with future development occurring under the proposed PMPU could involve the use of construction equipment, such as large cranes, construction barges, or other tall and/or bulky equipment, that could intrude into a designated scenic vista area or view corridor extension, which would temporarily interfere with the views provided by scenic vista areas or view corridor extensions, or prevent access to the scenic vista areas or view corridor extensions, which could have a substantial adverse effect on a designated scenic vista. Impacts are considered significant.

Mitigation Measures

For **Impact-AES-1**:

MM-AES-1: Plan Construction Schedule and Storage/Staging to Avoid Scenic Vista Areas and View Corridor Extensions. Prior to District approval of a future development project, the project proponent shall provide the District with the project's construction schedule, including the phasing of the construction, the type of construction equipment to be used, and the duration and location of the use of the construction equipment. The District shall review the construction schedule, and may require the proponent to alter the schedule to prevent extended interference with views from designated scenic vista areas or view corridor extensions. The project proponent shall locate construction equipment away from designated scenic vista areas or view corridor extensions when not in use or during staging to minimize potential impacts on views. The District shall review and approve the construction schedule and staging locations prior to project approval.

Significance After Mitigation

Implementation of **MM-AES-1** would minimize the visibility of construction activities within a scenic vista area or a view corridor extension. As noted in the impact analysis above, construction activities would generally not result in the substantial blockage of an extended length of the shoreline and while construction equipment could intrude into viewsheds, because construction equipment would be required to be stowed in a way to reduce its visibility within the viewshed, **MM-AES-1** would further help reduce the impact of construction activities on scenic vistas and view corridors by avoiding the temporary storage of large construction equipment within a scenic vista area. However,

because the type of construction equipment, and the duration and location of construction of future development projects, is unknown at the time of the writing of this PEIR, the implementation of **MM-AES-1** would not guarantee the reduction of adverse impacts resulting from construction activities on scenic vistas or view corridor extensions to below significant levels. Therefore, **Impact-AES-1** would be significant and unavoidable.

Threshold 2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Impact Analysis

Impacts of Water and Land Uses

The only State-designated scenic highway within the vicinity of the proposed PMPU area is a 9-mile segment of SR-75 as it crosses the San Diego–Coronado Bay Bridge and continues through Coronado and down the Silver Strand, terminating at the city limits of Imperial Beach (the portion of SR-75 that travels through Coronado and connects the bridge and the Silver Strand is an eligible state scenic highway but is not officially designated as such). The following analysis focuses first on the segment of SR-75 that crosses the San Diego–Coronado Bay Bridge and then discusses potential effects on the segment of SR-75 down the Silver Strand.

San Diego–Coronado Bay Bridge

Views from the 200-foot-tall SR-75/San Diego–Coronado Bay Bridge are expansive in all directions, including views of Downtown San Diego, the Central Embarcadero and South Embarcadero Subdistricts of PD3, and much of PD4, including TAMT and the Harbor Drive Industrial Subdistrict.

Scenic resources visible from SR-75/San Diego–Coronado Bay Bridge are the expansive views of the open water of the Bay, as well as the wide landscape and cityscape views that include the City of San Diego, the City of Chula Vista, and the City of Coronado. Scenic elements within views to the northwest and northeast from the SR-75/San Diego–Coronado Bay Bridge largely comprise the high-rise buildings that form the skyline of Downtown San Diego, TAMT, ship building and repair facilities, and the open water of the San Diego Bay. Views to the southeast and southwest include the Coronado bayfront, with the green lawns of Tidelands Park and the Coronado Golf Course being the most visible elements within the viewshed as well as the open water of the Bay and the A-5 anchorage. Given the height of the bridge and its distance from these areas, most of the features within these planning districts appear as background views. Detailed, individual features are generally not discernible from the overall development patterns that exist within these planning districts, and scenic resources such as trees or historic buildings are not highly visible from the bridge. In addition, as noted above, the bridge is only open to motor vehicles, there are no pullouts for viewing, and stopping on the bridge is prohibited by law. Also, the bridge has a speed limit of 50 miles per hour, and a concrete guardrail limits the view in lower profile vehicles.

Future development allowed under the proposed PMPU within PD4 would only involve low-profile improvements such as modifications to existing roadway or water-based access to increase multi-modal opportunities. Similarly, future development within PD10 would also involve low-profile improvements such as installation of a mobility hub, installation of new water-based transfer points,

or additional moorings at the anchorages within Glorietta Bay. However, the only location within PD10 where improvements may be visible from the bridge include the new water-based transfer point at Tidelands Park. While future development would introduce new components into these viewsheds, their distance from the bridge and the fact that views are observed from moving vehicles mean that features associated with the roadway or water-based access improvements would be minimally discernible within the broader context of the views. Furthermore, these future improvements would not involve the removal of any scenic resources, such as trees or historic structures, that contribute to the scenic value of these viewsheds.

Future development within the Central and South Embarcadero Subdistricts of PD3 could result in more intense development, including new commercial recreation uses. Central Embarcadero generally includes low-profile improvements, such as reconfiguration of roadways. In addition, per the development standards identified for this subdistrict, building heights would be limited to 45 feet (which is generally no more than three to four stories). As such, this development, or the removal of any scenic resources within Central Embarcadero, would not be noticeable from the bridge. South Embarcadero would involve the addition of a number of new hotel rooms, retail/restaurant space, and/or convention space and could include structures with heights similar to the other nearby hotels (such as the Hilton San Diego Bayfront). However, the only scenic resource in the vicinity of these planned improvements is the building that currently houses Joe's Crab Shack, which has a historic association with the San Diego Rowing Club. This building is located on a pier adjacent to EMPS. However, Joe's Crab Shack is a small building (one-story tall) that is not discernible from the San Diego-Coronado Bay Bridge, and none of the future development allowed under the proposed PMPU in South Embarcadero would involve damage to, or removal of, this resource.

Silver Strand

The second segment of the officially designated portion of SR-75 runs the length of the Silver Strand beginning at Avenida del Sol in the north to the city limits of Imperial Beach in the south. All of PD9 as well as a small portion of PD10 are in the vicinity of this scenic highway. Given how narrow, flat, and minimally developed the Silver Strand is, future development allowed under the proposed PMPU is likely to be visible from SR-75/Silver Strand Boulevard. However, almost all of the future improvements within PD9 would involve the addition of moorings or recreational berthing slips at existing anchorages and marinas, respectively. There are no existing scenic resources, such as trees, historic buildings, or rock outcroppings, in the areas where these improvements would occur, and, as such, no significant impacts on scenic resources within a state scenic highway would occur.

Based on the above, implementation of the proposed PMPU would not result in damage to scenic resources within a state scenic highway, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to scenic resources within a state scenic highway.

Option 1 is situated within the North Embarcadero Subdistrict, which does not contain any scenic resources and is not in the vicinity of a designated state scenic highway. Construction and operational activities occurring at this site would not be visible from nor damage any scenic resources within a state scenic highway. Therefore, construction and operation under Option 1 would not result in any additional or more severe impacts related to scenic resources within a designated state scenic highway than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to scenic resources within a state scenic highway.

Option 2 is situated within the North Embarcadero Subdistrict, which does not contain any scenic resources and is not in the vicinity of a designated state scenic highway. Construction and operational activities occurring at this site would not be visible from nor damage any scenic resources within a state scenic highway. Therefore, construction and operation under Option 2 would not result in any additional or more severe impacts related to scenic resources within a designated state scenic highway than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to scenic resources within a state scenic highway.

Option 3 is situated within the North Embarcadero Subdistrict, which does not contain any scenic resources and is not in the vicinity of a designated state scenic highway. Construction and operational activities occurring at this site would not be visible from nor damage any scenic resources within a state scenic highway. Therefore, construction and operation under Option 3 would not result in any additional or more severe impacts related to scenic resources within a designated state scenic highway than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

There are no proposed PMPU Element policies that would result in impacts related to damage to scenic resources within a state scenic highway.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Impacts would be less than significant, and no mitigation is required.

Threshold 3: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point), or in urbanized areas, conflict with applicable zoning and other regulations governing scenic quality?

Impact Analysis

The PMPU area is diverse in character and differs in the amount of urbanization in each planning district. The PMPU area meets the definition of an urbanized area per Public Resources Code (PRC) Section 21071, “an incorporated city with a population of at least 100,000” persons or has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000.” As shown in Table 4.11-1 of Section 4.11, *Population and Housing*, the combined population of the cities adjacent to the proposed PMPU area totals 1,787,498. In addition, all planning districts within the proposed PMPU area are adjacent to incorporated cities with populations of at least 100,000 or are adjacent to cities that, when combined with one or two of a contiguous incorporated city, have a population that equals or exceeds 100,000 people. As such, the proposed PMPU area qualifies as an urbanized area for the purposes of this analysis.

For urbanized areas, the analysis of impacts under Threshold 3 typically looks at whether a project would conflict with applicable zoning and other regulations governing scenic quality. However, the District presently has no adopted zoning or other regulations concerning scenic quality (other than the proposed PMPU policies) and the water and land within its jurisdiction are not subject to the zoning or other regulations concerning scenic quality adopted by other jurisdictions. Therefore, even though the proposed PMPU would occur within an urbanized area, this analysis focuses on the potential for the implementation of the proposed PMPU to substantially degrade the existing visual character or quality of public views in the proposed PMPU area.

Although the District presently does not have zoning or other regulations related to scenic quality, the District would establish development standards to protect visual quality with the adoption of the proposed PMPU. The PMPU establishes baywide development standards that would be applied to all future development in the proposed PMPU area (except where specifically noted in a subdistrict development standard), including Mobility Hub Standards (Section 4.1 of the proposed PMPU); Recreation Open Space and Activating Features Standards (Section 4.2 of the proposed PMPU); Pathway Standards (Section 4.3 of the proposed PMPU), View Standards (Section 4.4 of the proposed PMPU); Standards for Scenic Vista Areas (Section 4.4.1 of the proposed PMPU); Standards for View Corridor Extensions (Section 4.4.2 of the proposed PMPU); Standards for View Protection (Section 4.4.3 of the proposed PMPU); Structure Height, Setback, and Stepback Standards (Section 4.5 of the proposed PMPU); and Wayfinding Signage Standards (Section 4.6 of the proposed PMPU) (see Section 4.1.4.3, *Policies that May Avoid or Reduce Impacts*, above for a list of scenic vista, view corridor extension, and view protection standards). The PMPU also establishes specific development standards for all planning districts that set height limits and setback requirements for buildings, as well as sizing, siting, and orientation of structures and public realm features (such as waterside promenades), which would maintain existing planning district and subdistrict characteristics, and protect the visual quality of the subdistricts. Such standards would be enforced as part of the District’s CDP process described in Section 4.1.3, *Laws, Regulations, Plans, and Policies*. Combined,

the baywide and planning-district specific development standards would focus on protecting views, preventing encroachment of development into open space and pathways, and maintaining the existing unique visual character of each planning district. These development standards are considered in the following analysis.

Impacts of Water and Land Uses

Construction

Construction activities for the proposed PMPU would be visually apparent from surrounding areas and from other parts of the proposed PMPU area. Construction equipment may include large vehicles or equipment, including temporary stationary or mobile tower cranes for the construction of multi-story structures, which could be visible from the public vantage points in the surrounding area and could cause noticeable changes in the visual character of a project site. The PMPU does not propose any changes to the improvements in PD4 that were approved as part of the Tenth Avenue Marine Terminal Redevelopment Plan, which was approved in 2016 pursuant to and analyzed in the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component FEIR (SCH# 2015-031046); thus, the proposed PMPU would not result in additional construction requiring substantial equipment in the TAMT Subdistrict. Planned improvements proposed by the PMPU for PD4 would allow for roadway modifications and new or enhanced existing mobility connections, which would introduce typical construction equipment to PD4 that would be consistent with the industrial uses in the planning district. In addition, no future development or planned improvements are proposed for PD7 as part of the proposed PMPU. Thus, there would be no potential for construction to degrade the visual quality of PD7. Given the proposed PMPU's horizon year of 2050, construction of future development associated with the proposed PMPU could occur intermittently throughout the proposed PMPU area over the 30-year life of the plan depending on economic and market conditions.

There are no specific policies or development standards in the proposed PMPU that govern visual quality during construction. Construction equipment and activities would largely be contained within the project site of future development and would be temporary such that equipment would be removed when construction is completed. Thus, construction of future development would not result in a permanent impact on the visual character of a planning district or the proposed PMPU area as a whole. Overall, however, while the proposed PMPU area is an urbanized area where construction activities are a regular occurrence, given the potential scale of some of the future development, including the high-rise structures that could be developed in PD2 and PD3, large construction equipment, including cranes or barges (for in-water construction), could be present at the project sites for extended periods of time. In addition, given the overall amount of potential development and the duration that parcels within these high-profile, waterfront areas of the planning districts could experience construction, construction activities could temporarily result in a substantial degradation of visual character. Impacts are considered significant (**Impact-AES-2**).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses.

Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, construction of future development projects that are consistent with the proposed PMPU, including within PD3, would result in a significant impact related to visual character and quality (**Impact-AES-2**). This significant impact would still occur within PD3 under Option 1 due to future development that could still occur outside the option boundary within PD3.

Construction activities associated with Option 1 would involve similar construction activities as those described above but would generally not include the larger, more visually prominent equipment such as cranes or barges. Therefore, construction under Option 1 would not result in any additional or more severe impacts related to visual character and quality than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction of future development projects that are consistent with the proposed PMPU, including within PD3, would result in a significant impact related to visual character and quality (**Impact-AES-2**). This significant impact would still occur within PD3 under Option 2 due to the future development that could still occur outside the option boundary within PD3.

Construction activities associated with Option 2 would involve similar construction activities as those described above but would generally not include the larger, more visually prominent equipment such as cranes or barges. Therefore, construction under Option 2 would not result in any additional or more severe impacts related to visual character and quality than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction of future development projects that are consistent with the proposed PMPU, including within PD3, would result in a significant impact related to visual character and quality (**Impact-AES-2**). This significant impact would still occur within PD3 under Option 3 due to the future development that could still occur outside the option boundary within PD3.

Construction activities associated with Option 3 would involve similar construction activities as those described above but would generally not include the larger, more visually prominent equipment such as cranes or barges. Therefore, construction under Option 3 would not result in any additional or more severe impacts related to visual character and quality than buildout of the proposed PMPU without Option 3.

Operation

Planning Districts 1, 8, 9, and 10 would have minimal future development with the implementation of the proposed PMPU. Potential development for these planning districts mainly consists of additional moorings and recreational or commercial boat slips, and additional retail/restaurant space. Other planned improvements would include modification and realignment of existing

transportation facilities and the development of mobility hubs. These planned improvements would involve low-profile or small-scale development, and would not introduce visual elements that are incongruous with the existing visual character of these planning districts. Moreover, existing uses may be redeveloped in the future.

Development standards are also proposed as part of the PMPU, as described in the introduction for the Threshold 3 analysis, that establish requirements for the physical development of property and are intended to shape how new development would be designed, oriented, and accessed by the public. Per the proposed PMPU, baywide development standards would be applied consistently baywide, to development in all planning districts, except where specifically noted in a subdistrict development standard. In addition to compliance with the baywide development standards, all development would conform to the subdistrict development standards described in Chapter 5, *Planning Districts*, of the proposed PMPU. The standards outline the appropriate location for certain improvements, as well as the allowable structure heights, setbacks, stepbacks, and height exceptions. For example, Section 4.2.1 *Standards for Recreation Open Space*, of the proposed PMPU states:

“The following requirements apply to areas designated as Recreation Open Space:

1. Shall be located directly adjacent to the waterfront, i.e. between development and the water’s edge;
2. Should be designed with landscaping or native vegetation; [...]

In addition, future development in PD1, PD8, PD9, and PD10 would be required to comply with proposed development standards that apply to development within each subdistrict. The subdistrict development standards would be implemented to ensure that future development and planned improvements in each subdistrict is compatible with existing development as well as other future projects. In this way, future development under the proposed PMPU would conform to the existing aesthetic character of the planning districts and would not degrade the visual quality. Such standards would be implemented as part of the District’s CDP process described in Section 4.1.3 above.

No future development or improvements are proposed for PD7 and no additional development in PD4 beyond that already approved as part of the *Tenth Avenue Marine Terminal Redevelopment Plan* and analyzed in the associated certified Final EIR. Planned improvements proposed by the proposed PMPU for PD4 include modifications or reconfigurations of the existing roadway system for trucks, cars, pedestrians, and bicycles. All future development and planned improvements would comply with the baywide development standards and the PD4, subdistrict development standards, which would be enforced through the CDP process. These improvements would enhance circulation and access in PD4, but would not represent significant changes to the visual character of the planning district.

Future development in PD2 allowed under the proposed PMPU could include the development of a total of up to 4,060 additional hotel rooms, 239,500 square feet of additional retail/restaurant space, and additional in-water development including 5 moorings and 225 recreational boat slips across the four subdistricts. The planning district is dominated visually by existing hotel and marina-related buildings separated by surface parking lots and landscaped areas within the West Harbor Island Subdistrict; surface parking lots with one-story warehouses, administrative buildings, and a marina, and small restaurants in East Harbor Island; Recreation Open Space in Spanish

Landing Subdistrict, and major transportation facilities, parking lots, and office buildings in the Pacific Highway Corridor Subdistrict.

Future development in the West Harbor Island Subdistrict could result in the redevelopment or modification of existing hotel or marina buildings to provide up to 1,700 additional hotel rooms and/or 37,000 square feet of meeting rooms within them; or development of new hotel space with up to 1,700 rooms, 16,000 square feet of retail and/or 25,000 square feet of retail with restaurant space, 16,000 square feet of restaurant space, or 37,000 square feet of meeting space. Development of new or expanded hotel buildings would intensify the uses within this subdistrict with buildings that are of similar scale to the existing hotels. Potential future development would be required to implement both baywide development standards (as described in the introductory paragraphs of the analysis of Threshold 3) and subdistrict development standards, including but not limited to, West Harbor Island Subdistrict Development Standards PD2.16 through PD2.24 (found in Chapter 5.2, *Planning District 2: Harbor Island*, of the proposed PMPU), which identify setback and building orientation requirements to ensure that new development would not substantially degrade the existing visual character or quality of public views of West Harbor Island.

The East Harbor Island Subdistrict is currently dominated by industrial uses and parking lots; however, future development allowed under the proposed PMPU could include visitor-oriented development. Given the industrial nature of the visual experience, and the underutilized open parking lots within the subdistrict, the potential development of up to 1,360 additional hotel rooms and 92,500 square feet of retail and restaurant uses is intended to improve the visual character of this subdistrict by providing a more consistent development pattern and a more contiguous transition from the West Harbor Island Subdistrict to the East Harbor Island Subdistrict to the west to PD3 to the east. The height, massing, and scale, as well as setback and stepback requirements, of future development would be similar to those in West Harbor Island. Future development would be required to implement both baywide development standards (as described in the introductory paragraphs of the analysis of Threshold 3) and subdistrict development standards, including but not limited to, East Harbor Island Subdistrict Development Standards PD2.47 through PD2.56 (found in Chapter 5.2 *Planning District 2: Harbor Island* of the proposed PMPU), which identify the standards for waterside promenade development, walkways, and buildings heights, setbacks, and parking. The future development would also provide a more continuous and engaging connection of multi-modal transportation routes across the planning districts, and increased use of landscaping, which is intended to improve and enhance the visual character of the area.

Potential future development in the Spanish Landing Subdistrict includes up to 90,000 square-feet of additional retail/restaurant space that would be situated adjacent to the existing facilities of the Sheraton San Diego Hotel and Marina, and would appear as extension of an existing developed area. As such, this structure, which would be limited to 30 feet in height (approximately three stories), and could be between approximately 0.68 and 2 acres, would not introduce development that would conflict with the existing visual character of this area, because it would be consistent in use, size, and massing with the surrounding structures. The additional 1,000 hotel rooms that could be developed in the Pacific Highway Corridor Subdistrict would provide continuity between the West Harbor Island Subdistrict and the hotel uses in the adjacent neighborhoods of Downtown San Diego and PD3. Potential future development would be required to implement both baywide development standards (as described in the introductory paragraphs of the analysis of Threshold 3) and subdistrict development standards, including Spanish Landing Subdistrict Development Standards PD2.63 through PD2.68 (found in Chapter 5.2 *Planning District 2: Harbor Island*), which identify the

standards for public realm development, buildings heights, setbacks, and parking. The development standards would be enforced by the District through the CDP process. As noted above, due to the lack of a cohesive development pattern or any distinctive visual elements, the visual quality of this subdistrict is low, as is viewer sensitivity. The introduction of a new, more modern building would not conflict with the visual character.

Like PD2, PD3 would also experience more intense future development with the implementation of the proposed PMPU. Development allowed under the proposed PMPU in PD3 would include visitor-oriented services, including up to 2,113 additional hotel rooms, 99,122 square feet of retail/restaurant space, 150 additional recreational berthing slips, and 20 additional anchorages. Because the visual character of PD3 is dominated by dense urban development, the majority of these future improvements would occur as infill development or the redevelopment of existing uses. Given its adjacency to the dense, high-rise development of Downtown San Diego, the increased development within PD3 would be visually consistent with the rest of the planning district, as well as with the surrounding character of Downtown San Diego. The redevelopment of underutilized areas, such as open surface parking lots or outdated buildings, would improve the visual continuity of PD3 and would improve the overall visitor experience. Height limits permitted in PD3 would vary and would range from 160 to 200 feet in the North Embarcadero Subdistrict to no height limit in the South Embarcadero Subdistrict (height limits in Central Embarcadero are limited to 45 feet). New development occurring in the North and South Embarcadero Subdistricts would be similar to or lower than building heights in the surrounding area and would blend in with the taller office buildings and hotels of Downtown San Diego to the east and northeast of this planning district. North Embarcadero development would also allow for modification or expansion of water-based museum attractions, which are expansions of existing visitor-serving commercial uses within this area of the North Embarcadero Subdistrict and would include elements, such as additional historic vessels, that would be consistent with the existing visual character. South Embarcadero Subdistrict development would provide more meeting spaces, hotel rooms, and retail/restaurant space, all of which would complement the existing visitor-serving uses and would support the continued utilization of the Convention Center and other visitor destinations in the area.

Potential future development would be required to implement both baywide development standards (as described in the introductory paragraphs of the analysis of Threshold 3) and subdistrict development standards, including but not limited to, North Embarcadero Subdistrict Development Standards PD3.27 through PD3.35, Central Embarcadero Subdistrict Development Standards PD3.41 through PD3.43, and South Embarcadero Subdistrict Development Standards PD3.66 through PD3.69 (found in Chapter 5.3 *Planning District 3: Embarcadero*), which identify the standards for public realm development (waterfront promenades, walkways, scenic vista areas) and building standards (heights, setbacks, and parking). These standards would be enforced by the District during the CDP process.

In general, future development in PD3 would increase the intensity of uses or density of structures in certain areas but would be visually compatible with similar existing uses in the subdistricts and would maintain consistency of the development pattern.

As discussed throughout this analysis, baywide and planning district-specific development standards proposed as part of the proposed PMPU would ensure consistency with the existing character of the planning districts, and provide a consistent development strategy throughout the proposed PMPU area. PMPU-wide development standards are outlined in Chapter 4 of the proposed PMPU. These development standards are intended to establish requirements for all aspects of

development, including size, setbacks, location, orientation, spacing, access points, massing, and height. These standards would apply to the types of physical development that are identified in the proposed PMPU, such as mobility hubs, scenic vista areas, walkways, waterside promenades, and structures. These standards ensure that new development maintains appropriate spacing between structures, setbacks from the road, and proper widths for walkways, sidewalks, roadways, and view corridors. Through the implementation of baywide development standards, the proposed PMPU would ensure new development would be compatible with the existing pattern and character of development in each planning district.

Subdistrict development standards are established in each planning district (Chapters 5.1 through 5.10 of the PMPU). The development standards are applied to each subdistrict to provide guidance for the development of future improvements so the development complements the existing character and supports the proposed PMPU's vision for the planning districts. All future development within the planning district must comply with the requirements laid out in the subdistrict development standards as well as the baywide development standards, unless the subdistrict development standards specifically note an exception. Subdistrict development standards outline the exact location of the planned improvements proposed as part of the proposed PMPU, their orientation, and how they should be accessed. For buildings, the subdistrict development standards establish height limits, setbacks from curbs, upper story stepbacks, and requirements for building frontages. The development standards may even go further to establish different requirements for different blocks throughout a given subdistrict. These are proposed to carefully maintain the existing character of each subdistrict, and to achieve the goal and vision proposed by the PMPU, while acknowledging the characteristics of the subdistrict could change slightly from block to block, based on what type of visitor-serving use is proposed. New development's adherence to the subdistrict development standards would ensure the implementation of future development and planned improvements would not introduce incompatible elements that would substantially degrade the visual character and quality of the planning districts, and the proposed PMPU area, as a whole.

With the implementation of the baywide and subdistrict development standards, the proposed PMPU would ensure potential future development projects would be compatible with the existing development patterns in order to enhance the user experience and provide continuous bayfront access. Therefore, the future potential development associated with the implementation of the proposed PMPU would not substantially degrade the visual character or quality of the proposed PMPU area and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to visual character and quality during operations.

Operational activities associated with the new Waterfront Destination Park under Option 1 would include features typical of a park and would be required to comply with the proposed PMPU's baywide development standards for Recreation Open Space. Conformance with these standards would ensure that Option 1 would not introduce any elements that would detract from the visual character or quality of the surrounding area. Therefore, operations under Option 1 would not result in any additional or more severe impacts related to visual character and quality than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to visual character and quality during operations.

Operational activities associated with the expanded Recreation Open Space under Option 2 would include features typical of a park and would be required to comply with the proposed PMPU's baywide development standards for Recreation Open Space. Conformance with these standards would ensure that Option 2 would not introduce any elements that would detract from the visual character or quality of the surrounding area. Therefore, operations under Option 2 would not result in any additional or more severe impacts related to visual character and quality than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to visual character and quality during operations.

Operational activities associated with the new park space that could be developed under Option 3 would include features typical of a downtown park and would be required to comply with the proposed PMPU's baywide development standards for Recreation Open Space. Conformance with these standards would ensure that Option 3 would not introduce any elements that would detract from the visual character or quality of the surrounding area. Therefore, operations under Option 3 would not result in any additional or more severe impacts related to visual character and quality than buildout of the proposed PMPU, without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies described in Section 4.1.4.3 would not result in substantial adverse effects on visual character, such that it would conflict with applicable zoning and other regulations governing scenic quality. Compliance with PMPU WLU policies identified in Section 4.1.4.3, particularly WLU Objective 2.2, which requires new development be implemented in a manner that blends with and enhances the surrounding character, would ensure that the visual character of the planning district would remain constant as future development occurs.

Impact Determination and Mitigation

Construction activities associated with implementation of the proposed PMPU would substantially degrade the visual character or quality of public views of the area.

Significant Impacts

Impact-AES-2: Potential to Result in Substantial Degradation of Visual Character and Quality During Construction Associated with Implementation of the Proposed PMPU. Construction activities associated with future development occurring under the proposed PMPU could involve the use of construction equipment, such as large cranes, construction barges, or other tall and/or bulky equipment for extended periods of time, which could result in temporary substantial degradation of the visual character or quality of a site. Impacts are considered significant.

Mitigation Measures

For **Impact-AES-2**:

MM-AES-2: Install Construction Fencing. The project proponent shall be required to install construction-screening fencing around the entire perimeter of the project site to shield construction activities from sight. Construction screening shall include, at a minimum, installation of 8-foot-tall fencing for the duration of the construction period that is covered with view-blocking materials, such as tarp or mesh in a color that blends in with the existing environment such as a shade of green or blue, depending on the location. The District's Development Services Department shall confirm such fencing is depicted on the project's demolition and construction plans.

Significance After Mitigation

Implementation of **MM-AES-2** would help minimize the visibility of construction activities at a project site. However, because the location, duration, and scale of future development is not yet known, **MM-AES-2** may not fully reduce adverse impacts related to the substantial degradation of a project site due to construction activities. Accordingly, **Impact-AES-2** is considered significant and unavoidable.

Threshold 4: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Impact Analysis

Impacts of Water and Land Uses

Construction

Light

Most of the planning districts would experience minimal future development under the proposed PMPU, with landside improvements focusing on roadway improvements, installation of mobility hubs, and existing recreational resources enhancement; and waterside planned improvements involving improved coastal access opportunities, such as adding to or improving the number of water-based transfer points, or increasing the number of anchorage moorings or recreational berthing slips. Construction activities associated with some of these improvements would be short-term and likely limited to daytime hours. However, PD2 and PD3 would include larger construction projects associated with the development of hotels and new retail/restaurant space and would

involve longer construction timeframes and could include construction activities extending into evening hours.

As such, nighttime lighting sources during construction would consist of floodlights that would be focused on the work area to minimize light spillover. Throughout the proposed PMPU area, nighttime construction activities would be limited to activities that would not violate the noise ordinance of the adjacent city, including the City of San Diego's Noise Abatement and Control Ordinance Section 59.5.0404, Section 41.10.040 of the City of Coronado's Noise Abatement and Control Regulations, or Section 9.32.020 of the City of Imperial Beach's noise ordinance. These ordinances specify that any loud construction noise is only permitted from 7 a.m. to 7 p.m., Monday through Saturday, or in the case of Imperial Beach from 7 a.m. to 10 p.m. all days of the week. This would require construction activities to cease operation by 7 p.m. or 10 p.m., and lights for construction work (e.g., bright pole-mounted balloon lights) would not be used beyond these hours. However, even if no nighttime lighting would be used for construction activities, or beyond the regulated hours for construction, some lighting may be used overnight at the construction site for security reasons. Construction lighting used within PD2 and PD3 would occur within a highly urbanized environment and would blend in with the other sources of light from Downtown San Diego or SDIA. Therefore, construction of future development under the proposed PMPU would not result a substantial new source of temporary lighting, and impacts on nighttime views would be less than significant.

Glare

Increased truck traffic and transport of construction materials to various project sites during construction activities associated with implementation of the proposed PMPU would temporarily increase glare conditions as a result of light reflecting off vehicle windshields and construction materials. However, in addition to being temporary, this increase in glare would be largely indistinguishable from background glare, and would be variable. The sources noted would move throughout the construction site and off the site as necessary. Thus, the increase in glare would not affect existing glare conditions, which already involve varying degrees of vehicle and equipment activity—from light activity to heavy activity.

Travel routes for construction traffic would include roadways throughout the proposed PMPU area, with most of the future development occurring throughout PD2 and PD3, which are highly urbanized areas containing various sources of glare, including high-rise buildings with glazed façades and highly traveled routes that characteristically experience moderate levels of daytime glare from light reflecting off vehicle windshields. As such, the temporary increase in motor vehicle traffic that would occur during construction of the future development under the proposed PMPU would not be considered a new source of substantial glare. The increased truck traffic would blend in with the existing traffic and would be comparable to other truck traffic created by construction throughout the proposed PMPU area. Therefore, construction activities associated with implementation of the PMPU would not create a new source of substantial glare that would affect daytime views in the proposed PMPU area. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU

land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, construction of future development projects that are consistent with the proposed PMPU, including within PD3, would result in a less-than-significant impact related to light and glare.

Construction activities associated with Option 1 would involve similar construction activities and equipment as those described above, which would not result in substantial new sources of light and glare. Therefore, construction under Option 1 would not result in any additional or more severe impacts related to light and glare than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction of future development projects that are consistent with the proposed PMPU, including within PD3, would result in a less-than-significant impact related to light and glare.

Construction activities associated with Option 2 would involve similar construction activities and equipment as those described above, which would not result in substantial new sources of light and glare. Therefore, construction under Option 2 would not result in any additional or more severe impacts related to light and glare than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction of future development projects that are consistent with the proposed PMPU, including within PD3, would result in a less-than-significant impact related to light and glare.

Construction activities associated with Option 3 would involve similar construction activities and equipment as those described above, which would not result in substantial new sources of light and glare. Therefore, construction under Option 3 would not result in any additional or more severe impacts related to light and glare than buildout of the proposed PMPU without Option 3.

Operation

Light

Lighting sources introduced by new development that could occur with implementation of the proposed PMPU would involve interior lighting, exterior lighting for pedestrian safety and security, signage lighting, lighting along the piers for expansion of existing marinas, and lighting from the increase in vehicles traveling throughout the proposed PMPU area. For most of the planning districts, including PD1, PD4, PD7, PD9, and PD10, the proposed PMPU identifies relatively less intense future development such as enhancements or modifications to existing roadways to allow for multi-modal opportunities or the installation of mobility hubs and activating features. These

types of improvements would include new sources of lighting, including accent or security lighting, primarily along walkways, promenades, parking areas (either on-street or parking lots as part of mobility hubs), and public transit areas. These improvements would be located in urbanized and developed areas with existing lighting and would not introduce significant new sources of lighting.

Section 4.4.3 of the PMPU, *Standards for View Protection*, establishes requirements related to the protection of views and physical access for view corridor extensions, scenic vista areas, and walkways. These include the provision that exterior lighting, where required for security, to serve development, or to provide lighting on a public path, must be designed with low-intensity fixtures that are shielded and concealed so that light sources are not directly visible from public viewing areas and in accordance with ECO Goal 1 (Chapter 3.3, *Ecology Element*, of the PMPU).

In PD8, retail/restaurant uses are planned to increase by a total of approximately 18,000 square feet over existing conditions, which would include a small amount of new interior and exterior building lighting and parking lot or security lighting. Around 3,000 square feet of the proposed additional retail/restaurant space would involve expanding or redeveloping the existing restaurant at the end of the Imperial Beach Pier. The additional restaurant or retail space may include lighting for nighttime uses; however, the Imperial Beach Pier already includes nighttime lighting poles spaced evenly along the entire north side of the pier. In addition, the existing restaurant building at the end of the pier currently includes several bright sources of outdoor lighting, including two spotlights mounted on the roof and directed at the rooftop cupola, and indoor lighting is visible through the restaurant windows. As such, while the additional 3,000 square feet would introduce some new lighting on the interior and exterior of the building, this new source of lighting would not be a substantial addition to the existing sources along and at the end of the pier.

The remaining 15,000 square feet of additional retail/restaurant that could be developed within PD8 would be split between a parcel at Elkwood Avenue and a parcel at Palm Avenue. These sites are currently developed with parking lots and contain outdoor lighting for safety and security. While new retail/restaurant uses could increase the amount of lighting, both from indoor or outdoor sources, additional lighting sources would not introduce significant new sources of nighttime lighting at these parcels that would adversely affect nighttime views; they would also be subject to the proposed PMPU's lighting policies described above.

Waterside improvements would involve the addition of features such as new anchorage moorings, recreational berthing slips, and water-transfer points. While new boating slips and water-transfer points may require a small amount of security lighting, new anchorage moorings would not introduce any lighting. Therefore, waterside improvements associated with PD1, PD4, and PD7 through PD10 would not introduce a new source of substantial lighting.

The proposed PMPU planned improvements within PD2 and PD3 provide for the most substantial amount of new development. Up to approximately 4,500 new hotel rooms (including low-cost overnight accommodations) and up to approximately 240,000 square feet of new retail and restaurant space would be added to PD2 under the proposed PMPU. In addition, approximately 2,600 new hotel rooms (including low-cost overnight accommodations) as well as almost 100,000 square feet of retail/restaurant space and additional meeting and office space would be allowed in PD3 under the proposed PMPU. Waterside improvements would allow for an increase in the number of recreational boat berthing slips and moorings, as well as new water-based transfer points. This new development would increase the sources of lighting in these planning districts. The types of lighting introduced by this new development would include interior lighting, exterior lighting for

pedestrian safety and security, signage lighting, lighting along piers for new boat slips, and lighting from the increase in vehicles accessing the project site. Although the lighting would be increased over existing conditions, would be visible from offsite locations, and would contribute to the overall ambient glow of the project site and surrounding areas, per the proposed PMPU's developments standards, Section 4.4.3, *Standards for View Protection*, 2.d, lighting from onsite uses would be designed with low-intensity fixtures that are shielded and concealed so that light sources would not be directly visible from public viewing areas and would not spill directly onto other areas. In areas where existing uses would be redeveloped to further activate the waterfront, for example by enhancing the existing water-based museum attractions of PD3 or expanding the promenade along PD2, existing lighting that no longer fits the District's lighting parameters (i.e., is not shielded or downturned) would be replaced with new low-intensity shielded fixtures that would result in less light spillover and less interference with nighttime views. In addition, these additional sources of lighting would not be substantially brighter than existing light sources used by surrounding development, including Downtown San Diego and the brightly lit runways, parking lots, and buildings associated with SDIA.

Overall, existing nighttime views in the proposed PMPU area already experience a high level of nighttime lighting. While additional lighting would occur as a result of future development under the proposed PMPU, per PMPU View Protection Standard 2d, new lighting would be low-intensity and down-shielded, replacing much of the older lighting fixtures that are not shielded and allow for light spillage. The increased lighting would not adversely affect day or nighttime views in the area, and contributions to increased ambient glow would not represent a significant change in existing conditions that would be perceptible from surrounding sensitive viewing areas. Impacts would be less than significant.

Glare

While design specifications for specific projects are not available for this program-level analysis, exterior building materials used for future development throughout the proposed PMPU would generally be expected to be consistent with materials already used in the area and would generally consist of cement, plaster, and concrete, which are all non-reflective materials and would not create new sources of glare. Reflective materials, such as glass, mirrored glass, and metal, would largely be used for fenestration and accent materials on smaller retail or restaurant structures. New high-rise hotel buildings, defined as a building more than 75 feet above the lowest floor level having building access (California Code of Regulations, Title 24, Chapter 2, Section 202), could be constructed in PD2 and PD3, which would make greater use of reflective surfaces, including glass and metal for curtainwall façades, and have a greater potential for producing new sources of glare at various times of the day, depending on the angle of the sun and viewers relative to the building. This type of glare typically occurs during the hour or so after sunrise and before sunset. The proposed PMPU identifies height limits of up to 225 feet (approximately 15 stories) depending on the subdistrict in PD2 and no maximum height limit for buildings within the South Embarcadero Subdistrict. Given the potential height of hotel towers in PD2 and PD3, the potential for substantial glare would be highest within the bayfront area and adjacent Downtown San Diego community during times of the day when the sun is low in the horizon. Because the proposed PMPU area is highly urbanized and developed, existing daytime views already experience moderate levels of daytime glare. However, some of the future project sites may involve development on undeveloped sites or sites that currently do not contain sources of glare. Therefore, future development occurring as part of the

implementation of the proposed PMPU could contribute a new source of substantial glare, which would potentially affect daytime views in the area, resulting in a significant impact (**Impact-AES-3**).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to glare (**Impact-AES-3**). This significant impact would still occur within PD3 under Option 1, as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities associated with a new Waterfront Destination Park under Option 1 would include new sources of lighting, such as exterior lighting for pedestrian safety and security. As discussed above, development standards would require new lighting to be low-intensity and down-shielded, which would reduce light spillage into adjacent areas. As such, new sources of lighting under this option would not affect nighttime views in the area. In addition, it is not anticipated that any components of Option 1 would involve the use of materials that would introduce a substantial new source of glare into the area that could affect daytime views. Therefore, operations under Option 1 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to light and glare than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to glare (**Impact-AES-3**). This significant impact would still occur within PD3 under Option 2 due to the future development that could still occur outside the option boundary within PD3.

Operational activities associated with the expanded Recreation Open Space under Option 2 would include new sources of lighting, such as exterior lighting for pedestrian safety and security. As discussed above, development standards would require new lighting to be low-intensity and down-shielded, which would reduce light spillage into adjacent areas. As such, new sources of lighting would not affect nighttime views in the area. In addition, it is not anticipated that any components of Option 2 would involve the use of materials that would introduce a substantial new source of glare into the area that could affect daytime views. Therefore, operations under Option 2 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to light and glare than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to glare (**Impact-AES-3**). This significant impact would still occur within PD3 under Option 3 due to the future development that could still occur outside the option boundary within PD3.

Operational activities associated with new park space that could be developed under Option 3 would include new sources of lighting, such as exterior lighting for pedestrian safety and security. As discussed above, development standards would require new lighting to be low-intensity and down-shielded, which would reduce light spillage into adjacent areas. As such, new sources of lighting under this option would not affect nighttime views in the area. In addition, it is not anticipated that any components of Option 3 would involve the use of materials that would introduce a substantial new source of glare into the area that could affect daytime views. Therefore, operations under Option 3 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to light and glare than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

There are no proposed PMPU Element policies that would result in impacts related to new sources of substantial light and glare.

Impact Determination and Mitigation

Implementation of the proposed PMPU would create new sources of substantial glare that could adversely affect daytime or nighttime views in the area.

Significant Impacts

Impact-AES-3: New Permanent Source of Glare Generated by Potential High-Rise Development. New high-rise buildings constructed during implementation of the proposed PMPU could be designed using curtainwall façades that would use architectural finishes and materials that would increase the amount of glare produced at future project sites, which would represent a significant new source of substantial glare at the project site compared to existing conditions that would potentially affect daytime views in the area.

Mitigation Measures

For **Impact-AES-3**:

MM-AES-3: Incorporate the Use of Reduced Glare Building Materials. The project proponent for any future high-rise towers (over 75 feet or 7 stories) developed under the proposed PMPU shall incorporate non-reflective exterior building materials in their design, and any glass incorporated into the façade of the building shall either be of low reflectivity or accompanied by a non-glare coating. Glass and other material shall have a light reflectivity factor no more than 30% and no more than 50% of the building surface shall be made of reflective materials, to be consistent with the standards established in the City of San Diego Municipal Code §142.0730 Glare Regulations and any future amendments. Prior to issuance of a building permit for future high-rise hotel towers, the District shall confirm such non-reflective materials and low

reflectivity or non-glare coating are depicted on the appropriate building plans. Building plans and materials shall be consistent with specific design strategies as described in Section 4.3, *Biological Resources*, under **MM-BIO-9**, Implement Bird Strikes Reduction Measures on New Structures, to avoid or reduce potential for bird strikes.

Level of Significance After Mitigation

Implementation of **MM-AES-3** requires future project proponents of high-rise hotel structures over 75 feet or seven stories to incorporate reduced-glare building materials into the final project design, such as non-reflective building materials and glass that has a light reflectivity factor of 30% to meet the standard of no more than 50% of the building constructed of reflective materials. The incorporation of these features would ensure that **Impact-AES-3** is reduced to less-than-significant levels.

4.1.5 Cumulative Impact Analysis

A significant cumulative impact on aesthetics and visual resources would result if the proposed PMPU, in combination with past, present, and probable future projects, would result in substantial damage to scenic resources, substantially degrade the existing visual character or public views of the area, or create a new source of substantial light or glare that would adversely affect day or nighttime views in the cumulative area.

4.1.5.1 Geographic Scope

The geographic scope of analysis for cumulative aesthetics and visual resources impacts to which the proposed PMPU may contribute includes the scenic vistas and view corridor extensions identified in the proposed PMPU as well as the areas adjacent to each of the planning districts.

4.1.5.2 Cumulative Effects

Past development projects have changed the land in and around the San Diego bayfront and surrounding areas from a natural and undeveloped setting to an urban setting defined by moderate to high density development, including single- and multi-family residential neighborhoods, high-rise structures in Downtown San Diego, industrial areas, and smaller scale commercial or mixed use areas. In addition, past projects, along with present and future projects, have included, and will continue to include, development at or near the waterfront that has cumulatively contributed to blocking some inland views of the San Diego Bay. Planning District 3, which is adjacent to the urban development of Downtown San Diego, has been the location for numerous projects, including the Convention Center, high rise hotel buildings, and other visitor-serving commercial uses, that have crowded the waterfront, resulting in an urbanized visual character and limiting some public views. For example past and present development projects in PD3 have resulted in densification of development along the waterfront between the public rights-of-way and the coastal area along the Bay, reducing the quality of the views to the Bay and the waterfront from the publicly accessible viewpoints. The future proposed Seaport San Diego project is a mixed-use master development that includes retail, hotel, office, and tourism attractions (including an aquarium building and a 480-foot-tall observation tower), which would have the potential to obstruct existing or proposed scenic vistas areas and view corridors, as well as conflict with policies that regulate visual character in PD3.

Additionally, cumulative projects along the waterfront alter the view of the landscape or cityscape that is visible from scenic vistas across the Bay; for example, development along the waterfront in PD3 has altered the views from designated scenic vistas in PD2 and PD10. Current projects, including high rise hotels within the Tidelands and high-rise residential buildings within the City of San Diego's jurisdiction, continue to densify the proposed PMPU area and the vicinity, reducing public views of the Bay from upland areas contributing to the increasingly urbanized character, and resulting in significant new sources of light and glare. Past, present and future cumulative projects in other planning districts have also contributed to an increase in density of development along the bayfront; although these projects have been consistent with the visitor-serving uses of the Tidelands in most planning districts, they have nonetheless contributed to the concentration of buildings and structures in the proposed PMPU area. Past and present projects in PD4 have resulted in the planning district being developed entirely with marine terminal-related uses, contributing to the highly industrialized character of PD4 and the vicinity.

Future projects proposed within or adjacent to the proposed PMPU area, including the cumulative projects Seaport San Diego and National City Bayfront Projects and Plan Amendments EIR may introduce structures that would not be consistent with the existing land use and visual character of the proposed PMPU area due to height and scale. Future projects such as these could result in permanent adverse effects on visual character, and would require a PMP amendment to ensure compliance with established visual standards, and continuity with the existing and planned visual character.

Construction of the past, present, and future projects often includes the use of heavy or obtrusive equipment, such as cranes or building scaffolding, which results in a skyline view interrupted by construction equipment, or more immediate views that are blocked or diminished by the presence of visually unappealing construction equipment. Although construction is so common it is an expected characteristic of an urban setting, the combined effect of consecutive construction projects along the waterfront can result in significant intrusions to scenic vistas and cumulative effects on the overall visual quality.

Past and present cumulative projects have been generally consistent with the visual character, size, scale, and bulk of historic development in the proposed PMPU area due to existing design and viewshed regulations provided in the District's PMP and the adjacent communities' development codes. However, it is possible future cumulative projects would be incompatible with the visual character or obstruct scenic vistas due to noncompliance with land use and design regulations, or conflicts between regulations and guidelines in adjacent jurisdictions. Compliance with these applicable plans and regulations would also limit future glare and light impacts; however, future cumulative projects may also be inconsistent with design and development standards and result in adverse effects on day and nighttime views.

Although development from past, present, and probable future projects has been, and will continue to be, designed in accordance with the existing viewshed regulations and design guidelines, cumulative projects have continued to change the bayfront and surrounding areas to more urbanized settings, and probable future projects would continue this path of development. Consequently, past, present, and probable projects would result in a cumulatively significant impact on scenic vistas, visual character and quality, and light and glare.

4.1.5.3 Project Contribution

The proposed PMPU would facilitate the construction of future visitor-serving uses within the proposed PMPU area, such as new hotels and lower cost accommodations, restaurants, park space and promenades, retail, convention and meeting space, office space, and other uses. As discussed in Section 4.1.4.4, future development allowed under the proposed PMPU would not damage scenic resources within a state scenic highway, or degrade the visual character of the proposed PMPU area and the surrounding areas, or result in substantial lighting impacts. Therefore, the proposed PMPU's incremental contribution to such impacts would not be cumulatively considerable for these issues. Construction associated with future development under the proposed PMPU, including Option 1, 2, or 3, would result in impacts related to the potential to block or interfere with scenic vista areas or view corridors due to construction equipment or result in the substantial degradation of visual character (**Impact-C-AES-1** and **Impact-C-AES-2**), which would be significant cumulative impacts prior to mitigation. Due to the unknown nature of the location and timing of future development projects under the proposed PMPU, it is likely the implementation of the PMPU could result in the placement of several construction projects within the viewsheds of scenic vistas areas or view corridors, contributing to a cumulative impact on the quality of designated scenic vistas. As such, the proposed PMPU has the potential to result in a cumulatively considerable impact on scenic vistas from construction of future development. Mitigation (**MM-AES-1** and **MM-AES-2**) would be implemented to reduce any impacts through the review and approval of the construction schedule, locating construction equipment away from designated scenic vistas, and installing construction fencing. These measures would reduce impacts, but given the unknown nature and timing of construction and the potential for concurrent construction with other cumulative projects, the impact would remain significant. As such, the proposed PMPU would result in a cumulatively considerable contribution to these impacts.

Implementation of the proposed PMPU, including the selection of Option 1, 2, or 3, would include the future development of high-rise buildings that could result in a substantial increase in glare (**Impact-C-AES-3**), which would be a significant cumulative impact before mitigation. Mitigation (**MM-AES-3**) would require the use of non-reflective materials for high-rise buildings over 75 feet or seven stories tall, which would reduce this impact to a less-than-significant level. As such, the proposed PMPU would not result in a cumulatively considerable contribution related to glare.

As noted above, a significant cumulative aesthetics and visual resources impact is present as a result of the past, present, and probable future cumulative projects in the proposed PMPU area. The impacts associated with future development allowed under the proposed PMPU, including implementation of Option 1, 2, or 3, would result in significant impacts that would make a cumulatively considerable contribution to the cumulative impact. Therefore, the proposed PMPU's contribution to cumulative impacts on aesthetics and visual resources would be cumulatively considerable.

4.1.5.4 Cumulative Impact Determination and Mitigation

The proposed PMPU's contribution to a cumulative aesthetics and visual resources impact would be cumulatively considerable. Potential cumulatively considerable impacts include:

Impact-C-AES-1: Potential to Result in Cumulatively Considerable Adverse Impacts on Scenic Vista Areas or View Corridors During Construction. Construction activities associated with future development occurring under the proposed PMPU could involve the use of construction

equipment, such as large cranes, construction barges, or other tall and/or bulky equipment, that could intrude into a designated scenic vista area or view corridor extension, which could entirely block or interfere with the views provided by scenic vista areas or view corridors, or prevent access to the scenic vista areas or view corridors. In combination with other construction activity in or adjacent to the proposed PMPU area, this would result in a cumulatively considerable impact on scenic vista areas or view corridors.

Impact-C-AES-2: Potential to Result in Cumulatively Considerable Substantial Degradation of Visual Character and Quality During Construction. Construction activities associated with future development occurring under the proposed PMPU could involve the use of construction equipment, such as large cranes, construction barges, or other tall and/or bulky equipment for extended periods of time, which could result in temporary substantial degradation of the visual character or quality of a site. In combination with other construction activity in or adjacent to the proposed PMPU area, this would result in a cumulatively considerable impact on visual quality and character.

Impact-C-AES-3: Potential to Result in a Cumulatively Considerable New Permanent Source of Glare Generated by Potential High-Rise Development. New high-rise buildings constructed during implementation of the proposed PMPU could be designed using curtainwall façades that would use architectural finishes and materials that would increase the amount of glare produced at future project sites, which would represent a significant new source of substantial glare that could potentially affect daytime views in the area. In combination with other high-rise buildings in or adjacent to the proposed PMPU area, this would result in a cumulatively considerable impact related to glare.

Mitigation Measures

For **Impact-C-AES-1**:

Implement **MM-AES-1**, as described in Threshold 1.

For **Impact-C-AES-2**:

Implement **MM-AES-2**, as described in Threshold 3.

For **Impact-C-AES-3**:

Implement **MM-AES-3**, as described in Threshold 4.

Level of Significance After Mitigation

As discussed above, implementation of **MM-AES-1** would reduce the impacts of construction of activities associated with future development under the proposed PMPU within scenic vistas or view corridor extensions, but would not reduce the proposed PMPU's contribution to **Impact-C-AES-1** to less than cumulatively considerable. Mitigation measure **MM-AES-2** would reduce impacts on visual character from construction activities; however, **MM-AES-2** may not fully reduce adverse impacts related to the substantial degradation of a project site due to construction activities. Accordingly, the proposed PMPU's contribution to **Impact-C-AES-1** and **Impact-C-AES-2** would be cumulatively considerable and unavoidable. With respect to cumulative impacts associated with glare, **MM-AES-3** would require the use of non-reflective materials for high-rise buildings over 75 feet or seven stories tall, which would reduce the proposed PMPU's contribution to **Impact-C-AES-3** to less than cumulatively considerable.

4.2.1 Overview

This section describes the existing conditions and laws and regulations for air quality and health risk. The section also discusses the proposed Port Master Plan Update’s (PMPU’s) potential to increase air emissions in the region. Impacts on air quality are considered significant if the PMPU would (1) conflict with or obstruct implementation of the applicable air quality plan, (2) result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as nonattainment under an applicable Federal or State ambient air quality standard, (3) expose sensitive receptors to substantial pollutant concentrations, or (4) result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. The supporting calculations and modeling of air emissions is provided in Appendix C.

Table 4.2-1 summarizes the significant impacts and mitigation measures (MMs) discussed in Section 4.2.4.4, *Project Impacts and Mitigation Measures*.

Table 4.2-1. Summary of Significant Air Quality and Health Risk Impacts and Mitigation Measures

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-AQ-1: New Land Use Designations Not Accounted for in the RAQS and SIP	All planning districts	MM-AQ-1: Update the RAQS and SIP with New Growth Projections	Less than Significant	The temporary inconsistency with the current RAQS and SIP associated with the proposed land use designation changes would be rectified when the RAQS and SIP are updated, but because the exact timing of the RAQS and SIP update is unknown, the project’s additional emissions associated with new growth projections not currently reflected in the RAQs and SIP would remain inconsistent with these plans.

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-AQ-2: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Construction.	All planning districts	<p>MM-AQ-2: Implement Best Management Practices During Construction of all Future PMPU-Consistent Projects</p> <p>MM-AQ-3: Implement Diesel Emission-Reduction Measures During Construction of All Future PMPU-Consistent Projects</p> <p>MM-AQ-4: Implement Fugitive Dust Control During Construction of All PMPU-Consistent Projects</p> <p>MM-AQ-5: Use Low-VOC Interior and Exterior Coatings During Construction of All PMPU-Consistent Projects</p> <p>MM-AQ-6: Use Modern Harbor Craft and Dredgers During Construction Activities</p> <p>MM-AQ-7: Conduct an Annual Technology Review for Construction Activities</p> <p>MM-AQ-8: Conduct Project-Level Environmental Reviews</p>	Less than Significant	Mitigation would reduce project-related construction emissions below a level of significance during construction.
Impact-AQ-3: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Operations	All planning districts	<p>MM-AQ-9: Implement Sustainability Measures in All Development through 2030</p> <p>MM-AQ-10: Require All New Hotels to Reduce Natural Gas Prior to 2030 and All New Development to be Carbon Neutral After 2030</p> <p>MM-AQ-11: Install EV Charging Infrastructure</p> <p>MM-AQ-12: Advance Recreational Boat Electrification</p>	Significant and Unavoidable	Mitigation would reduce project-related operational emissions, but emissions would remain above thresholds.
Impact-AQ-4: Health Effects During PMPU Buildout	All planning districts	MM-AQ-2 through MM-AQ-8	Less than Significant	Mitigation would reduce construction-related emissions that contribute to regional

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Construction from ROG and NO _x Emissions				and local health effects below a level of significance during construction.
Impact-AQ-5: Health Effects During PMPU Buildout Operations from ROG, NO _x , and CO	All planning districts	MM-AQ-9 through MM-AQ-12	Significant and Unavoidable	Mitigation would reduce operations-related emissions that contribute to regional and local health effects, but emissions would remain above thresholds.
Impact-C-AQ-1: New Land Use Designations Not Accounted for in the RAQS and SIP	All planning districts	MM-AQ-1	Less than Significant	The temporary inconsistency with the current RAQS and SIP associated with the proposed land use designation changes would be rectified when the RAQS and SIP are updated. However, because the exact timing of the RAQS and SIP update is unknown, the project's additional emissions associated with new growth projections not currently reflected in the RAQs and SIP would remain inconsistent with these plans.
Impact-C-AQ-2: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Construction	All planning districts	MM-AQ-2 through MM-AQ-8	Less than Significant	Mitigation would reduce project-related construction emissions below a level of significance during construction.
Impact-C-AQ-3: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Operations	All planning districts	MM-AQ-9 through MM-AQ-12	Significant and Unavoidable	Mitigation would reduce construction-related emissions that contribute to regional and local health effects below a level

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
				of significance during construction.
Impact-C-AQ-4: Health Effects During PMPU Buildout Construction from ROG and NO _x Emissions	All planning districts	MM-AQ-2 through MM-AQ-8	Less than Significant	Mitigation would reduce operations-related emissions that contribute to regional and local health effects, but emissions would remain above thresholds.
Impact-C-AQ-5: Health Effects During PMPU Buildout Operations from ROG, NO _x , and CO	All planning districts	MM-AQ-9 through MM-AQ-12	Significant and Unavoidable	Mitigation would reduce project-related construction emissions below a level of significance during construction.

4.2.2 Existing Conditions

This section describes the existing air quality and health risk setting of the proposed PMPU area. Section 4.2.2.1 describes climate and atmospheric conditions in the proposed PMPU area. Section 4.2.2.2 describes background air quality conditions, including monitoring data and attainment status. Section 4.2.2.3 describes air quality pollutants of concern. Section 4.2.2.4 describes background air quality and health risk data.

4.2.2.1 Climate and Atmospheric Conditions

Regional

The proposed PMPU area comprises the entirety of the San Diego Unified Port District's (District's) jurisdiction in Planning Districts (PDs) 1, 2, 3, 4, 8, 9, 10, and a portion of PD7, including approximately 3,535 acres of water and 2,403 acres of land in and around San Diego Bay and along the Imperial Beach oceanfront. The planning area is within the San Diego Air Basin (SDAB), which is bordered by the Pacific Ocean to the west, the South Coast Air Basin (SCAB) to the north, the Salton Sea Air Basin to the east, and the United States/Mexico border to the south.

The climate of San Diego is classified as Mediterranean but is incredibly diverse because of the topography. The climate is dominated by the Pacific high-pressure system that results in mild, dry summers and mild, wet winters. San Diego experiences an average of 201 days above 70°F and 9–13 inches of rainfall annually (mostly, November–March). El Niño and La Niña patterns have large effects on the annual rainfall received in San Diego (SDAPCD 2016a).

An El Niño is a warming of the surface waters of the eastern Pacific Ocean. It is a climate pattern that occurs across the tropical Pacific Ocean that is associated with drastic weather occurrences,

including enhanced rainfall in Southern California. La Niña is a term for cooler than normal sea surface temperatures across the Eastern Pacific Ocean. San Diego receives less than normal rainfall during La Niña years (SDAPCD 2016a).

The Pacific High drives the prevailing winds in the SDAB. The winds tend to blow onshore in the daytime and offshore at night. In the summer, an inversion layer is created over the coastal areas and increases the ozone (O₃) levels. In the winter, San Diego often experiences a shallow inversion layer that tends to increase carbon monoxide (CO) and particulate matter (PM) less than or equal to 2.5 microns in diameter (PM_{2.5}) concentration levels due to the increased use of residential wood burning (SDAPCD 2016a).

In the fall months, the SDAB is often impacted by Santa Ana winds, which result from a high-pressure system over the Nevada-Utah region that overcomes the westerly wind pattern and forces hot, dry winds from the east to the Pacific Ocean. These winds are powerful and incessant. They blow the air basin's pollutants out to sea. However, a weak Santa Ana can transport air pollution from the SCAB and greatly increase the San Diego O₃ concentrations. A strong Santa Ana also primes the region's vegetation for firestorm conditions (SDAPCD 2016a).

Local

While regional climate patterns drive the largescale movement and dispersal of air pollutants, local meteorological and topographic conditions can influence ambient air quality conditions. The California Air Resources Board (CARB) and San Diego Air Pollution Control District (SDAPCD) maintain a network of air quality monitoring stations throughout the county that measure various atmospheric conditions, such as wind speed, wind direction, and air temperature. These variables interact with the physical features of the landscape and existing air pollution sources, and can yield slightly different air quality conditions within each of the PDs.

There are two climate monitoring stations—Lindbergh Field and Chula Vista—in the proposed PMPU vicinity. Table 4.2-2 summarizes temperature and precipitation data for each station. Historical climate conditions at these stations are assumed to be representative of the prevailing climate conditions for the planning districts, as noted in Table 4.2-2. Note that local climate conditions in some districts may be characterized by data from more than one station.

Table 4.2-2. Summary of Local Climate Conditions (Temperature and Precipitation)

Station	Planning District(s)	Average Temperature (°F)			Average Annual Precipitation (inches)	Average Wind Speed and Direction
		Annual	Summer	Winter		
Lindbergh Field (047740)	Shelter Island (PD1) Harbor Island (PD2) Embarcadero (PD3) Working Waterfront (PD4) Coronado Bayfront (PD10)	63.2	68.8	57.0	10.13	West-Northwest at 6.33 mph

Station	Planning District(s)	Average Temperature (°F)			Average Annual Precipitation (inches)	Average Wind Speed and Direction
		Annual	Summer	Winter		
Chula Vista (041758)	South Bay (PD7) Imperial Beach Oceanfront (PD8) Silver Strand (PD9)	61.0	67.0	54.6	9.73	West at 3.87mph

Source: Western Regional Climate Center 2020, Reeve pers. comm.

mph = miles per hour

In addition to the Lindbergh Field and Chula Vista stations, there is a wind monitoring station at Perkins Elementary School, which is just east of PD4 in the Barrio Logan community. Wind patterns at Perkins School indicate a prominence of westerly winds averaging 4.27 miles per hour (mph), with calm winds present approximately 10.01 percent of the time. Wind monitoring data recorded at the Lindbergh Field Station indicate a more west-northwest prominence, averaging 6.33 mph, with calm winds present approximately 0.84 percent of the time. Wind monitoring data recorded at the Chula Vista Station indicate a prominence of westerly winds averaging 3.87 mph with calm winds present approximately 12.5 percent of the time (Reeve pers. comm.). Wind roses depicting wind directions, speeds, and frequency for these stations are shown in Appendix C of this Program Environmental Impact Report (PEIR).

4.2.2.2 Air Quality Conditions

Regional

The Federal Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to designate areas within the country as being either in attainment or nonattainment for each criteria pollutant based on whether the national ambient air quality standards (NAAQS) have been achieved. Similarly, the California CAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the California Ambient Air Quality Standards (CAAQS) have been achieved. If a pollutant concentration is lower than the State or Federal standard, the area is classified as being in attainment for that pollutant. If a pollutant violates the standard, the area is considered a nonattainment area. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated unclassified.

Under the California CAA, areas are designated as nonattainment for a pollutant if air quality data show that a State standard for the pollutant was violated at least once during the previous 3 calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard and are not used as a basis for designating areas as nonattainment. The attainment status of San Diego County is summarized in Table 4.2-3.

Table 4.2-3. Federal and State Attainment Status for San Diego County

Criteria Pollutant	Federal Designation	State Designation
Ozone (O ₃) (8-hour)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment
Respirable Particulate Matter (PM ₁₀)	Unclassifiable/Attainment	Nonattainment

Criteria Pollutant	Federal Designation	State Designation
Fine Particulate Matter (PM _{2.5})	Attainment	Nonattainment
Nitrogen Dioxide (NO ₂)	Attainment	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead (Pb)	Attainment	Attainment
Sulfates	(No Federal standard)	Attainment
Hydrogen Sulfide	(No Federal standard)	Unclassified
Visibility	(No Federal standard)	Unclassified

Sources: SDAPCD 2021a.

Note: At the time of designation, if the available data do not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

Local

SDAPCD maintains and operates a network of ambient air monitoring stations throughout the county. The purpose of the monitoring stations is to measure ambient concentrations of O₃, NO₂, CO, SO₂, Pb, PM₁₀, and PM_{2.5} and determine whether the ambient air quality meets the CAAQS and NAAQS. Air monitoring indicates downward concentration trends in air pollutant concentrations despite the increase in population and activity. Specifically, O₃ levels are down over the past two decades but continue to periodically exceed the NAAQS and CAAQS; NO₂ and CO levels show a substantial downward trend as a result of improved emission control technology on mobile source; trace levels of SO₂ are monitored as sulfur emissions have declined tremendously over the past 20 years due to various diesel fuel and emission regulations; lead is only monitored at McClellan-Palomar Airport (in Carlsbad), and levels are so low that SDAPCD has requested EPA to close the monitor; and PM₁₀ and PM_{2.5} emissions have trended down. While concentrations periodically and temporarily exceed standards, the largest exceedances are due to severe wildfires, and the SDAB maintains attainment status for NAAQS but is designated as nonattainment for the CAAQS (SDAPCD 2020a).

There are three monitoring stations within the vicinity of the proposed PMPU area. The San Diego–Beardsley Street and San Diego–Sherman Elementary stations are near the northern portion of the proposed PMPU area, and the Chula Vista station is near the southern portion.

None of these stations monitor CO. Thus, the maximum concentrations from the two stations in the region that do currently monitor CO—11403 Rancho Carmel Drive in San Diego and 533 First Street in El Cajon—are utilized. Concentrations of pollutants for the most recent period available from both stations are presented in Table 4.2-4.

The San Diego–Beardsley Street station closed in November 2016. The SDAPCD relocated the site to Sherman Elementary School (approximately 1 mile north of the project site) and began operating the site in March 2020. Monitoring information from the San Diego–Sherman Elementary station is shown for only for 2020. Monitoring information from the San Diego–Beardsley Street station is shown for the multi-year period of record available, which is the 2014–2016 timeframe. Monitoring data from Chula Vista is shown for the 2014–2020 time period. At the time of analysis, data from the 2021 calendar year was not yet available.

As presented in Table 4.2-4, over the 3 years of available data (2014–2016), monitoring has shown the following ambient air quality standard violations at the San Diego–Beardsley Street station.

- 8-hour O₃ CAAQS exceeded twice in 2014.
- 8-hour O₃ NAAQS exceeded once in 2014.
- PM10 24-hour CAAQS exceeded six times in 2015 and one time in 2016.
- PM2.5 24-hour NAAQS exceeded one time in 2014.

As shown, the Chula Vista monitoring station recorded one violation of the 8-hour O₃ CAAQS and NAAQS in 2014, one violation of the 8-hour O₃ CAAQS in 2017, one violation of the PM10 24-hour CAAQS, and a violation of the PM2.5 24-hour NAAQS in both 2017 and 2018.

As shown, in 2020, the San Diego–Sherman Elementary station recorded three violations of the 8-hour O₃ CAAQS and NAAQS, two violations of the 8-hour O₃ CAAQS, and two violations of the PM2.5 24-hour NAAQS.

Table 4.2-4. Ambient Background Concentrations from Area Monitoring Stations

Pollutant Standards	San Diego–Beardsley Street			Chula Vista						San Diego–Sherman Elementary 2020	
	2014	2015	2016	2014	2015	2016	2017	2018	2019	2020	
1-Hour Ozone (O₃)											
Maximum Concentration (ppm)	0.093	0.089	0.072	0.093	0.088	0.073	0.085	0.076	0.090	0.106	0.115
<i>Number of days standard exceeded</i>											
CAAQS 1-hour (>0.09 ppm)	0	0	0	0	0	0	0	0	0	1	2
8-Hour Ozone (O₃)											
State Maximum Concentration (ppm)	0.072	0.067	0.061	0.072	0.066	0.068	0.074	0.064	0.077	0.086	0.088
National Maximum Concentration (ppm)	0.072	0.067	0.061	0.072	0.066	0.068	0.074	0.064	0.076	0.086	0.087
National 4 th Highest Concentration (ppm)	0.068	0.061	0.058	0.063	0.061	0.061	0.064	0.057	0.065	0.071	0.070
<i>Number of days standard exceeded</i>											
CAAQS 8-hour (>0.070 ppm)	2	0	0	1	0	0	1	0	2	4	3
NAAQS 8-hour (> 0.070 ppm)	1	0	0	1	0	0	0	0	2	4	3
Carbon Monoxide (CO)¹											
Maximum Concentration 8-hour Period (ppm)	1.9	1.9	1.7	--	--	1.2	1.5	1.4	2.5	1.7	--
Maximum Concentration 1-hour Period (ppm)	2.7	2.6	2.2	--	--	2.0	2.0	1.9	4.1	3.3	--
<i>Number of days standard exceeded</i>											
NAAQS 8-hour (≥9 ppm)	0	0	0	--	--	0	0	0	0	0	--
CAAQS 8-hour (≥9.0 ppm)	0	0	0	--	--	0	0	0	0	0	--
NAAQS 1-hour (≥35 ppm)	0	0	0	-	-	0	0	0	0	0	-
CAAQS 1-hour (≥20 ppm)	0	0	0	--	--	0	0	0	0	0	--

Pollutant Standards	San Diego–Beardsley Street			Chula Vista							San Diego–Sherman Elementary 2020
	2014	2015	2016	2014	2015	2016	2017	2018	2019	2020	
Nitrogen Dioxide (NO₂)											
Maximum 1-hour Concentration	75.0	62.0	73.0	55.0	49.0	54.0	57.0	52.0	50.0	45.0	53.0
Annual Average Concentration	13	14	--	11	10	9	--	9	8	9	10
<i>Number of days standard exceeded</i>											
CAAQS 1-Hour (0.18 ppm)	0	0	0	0	0	0	0	0	0	0	0
NAAQS 1-Hour (0.100 ppm)	0	0	0	0	0	0	0	0	0	0	0
Suspended Particulates (PM10)											
State Maximum 24-hour Concentration	41.0	54.0	51.0	39.0	45.0	48.0	61.0	45.0	69.4	--	--
National Maximum 24-hour Concentration	40.0	53.0	49.0	38.0	46.0	48.0	59.0	45.0	68.2	--	--
State Annual Average Concentration (CAAQS = 20 µg/m ³)	23.8	23.2	--	23.4	19.8	21.8	21.7	--	--	--	--
<i>Number of days standard exceeded</i>											
CAAQS 24-hour (>50 µg/m ³)	0	6	1	0	0	0	1	0	1	--	--
NAAQS 24-hour (>150 µg/m ³) - Expected Days	0	0	0	0	0	0	0	0	--	--	--
Suspended Particulates (PM2.5)											
National Maximum 24-hour Concentration (µg/m ³)	36.7	33.4	34.4	26.5	33.5	23.9	42.7	41.9	18.9	46.7	51.9
24-hour Standard 98 th Percentile (µg/m ³)	24.8	19.6	--	19.3	18.9	17.9	--	29.4	16.5	31.4	31.7
National Annual Average Concentration (NAAQS = 12.0 µg/m ³)	10.1	9.3	--	9.2	8.3	8.7	--	9.9	8.1	10.7	10.6

Pollutant Standards	San Diego–Beardsley Street			Chula Vista							San Diego–Sherman Elementary
	2014	2015	2016	2014	2015	2016	2017	2018	2019	2020	2020
State Annual Average Concentration (CAAQS = 12 $\mu\text{g}/\text{m}^3$)	10.2	10.2	--	9.3	8.4	8.7	--	10.0	--	--	10.8
<i>Number of days standard exceeded</i>											
NAAQS 24-Hour (>35 $\mu\text{g}/\text{m}^3$)	1	0	0	0	0	0	1	1	0	2	2

Source: CARB 2021a; EPA 2021. Data compiled by ICF.

¹CO concentrations are taken from the monitoring stations at 11403 Rancho Carmel Drive in San Diego and 533 First Street in El Cajon.

Note: Values denoted with an "--" indicate data that was not available at the time data was accessed.

ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

Sensitive Receptors

The impact of air pollutant emissions on sensitive members of the population is a special concern. Sensitive receptors are defined as locations where pollutant-sensitive members of the population may reside or where the presence of air pollutant emissions could adversely affect use of the land. CARB has identified the following people as the most likely to be affected by air pollution: children younger than 14, adults older than 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors (CARB 2005a). Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder-care facilities, elementary schools, and parks. Most health studies indicate that health effects are strongest within 1,000 feet of emission sources (CARB 2005a).

The proposed PMPU area supports a diverse range of land uses, including commercial, industrial, and recreational uses, such as hotels and parks. While there are no residential uses within the proposed PMPU area, single- and multiple-family homes are located immediately adjacent to most of the planning districts. Educational, recreational, and religious facilities are also within 0.25 mile of the proposed PMPU area.

Refer to Section 4.9, *Land Use and Planning*, for additional information on land uses within and adjacent to the proposed PMPU area.

4.2.2.3 Pollutants of Concern

Criteria Pollutants

As discussed above, the Federal and State governments have established NAAQS and CAAQS, respectively, for six criteria pollutants: O₃, Pb, CO, NO₂, SO₂, and PM₁₀ and PM_{2.5}. Ozone is considered a regional pollutant because its precursors affect air quality on a regional scale. Pollutants such as CO, NO₂, SO₂, and Pb are considered local pollutants that tend to accumulate in the air locally. PM is both a local and a regional pollutant. The primary criteria pollutants of concern generated by the project are ozone precursors (volatile organic compounds [VOC] and nitrogen oxides [NO_x]), CO, and PM.

All criteria pollutants can have human health and environmental effects at certain concentrations. The ambient air quality standards for these pollutants (Table 4.2-4) are set to protect public health and the environment within an adequate margin of safety (CAA Section 109). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants, and form the scientific basis for new and revised ambient air quality standards.

Principal characteristics and possible health and environmental effects from exposure to the primary criteria pollutants generated by the project are discussed below.

- **Ozone**, a component of urban smog, is photochemical oxidant that is formed when VOC (also known as ROG)¹ and NO_x (both byproducts of the internal combustion engine) react with

¹ EPA formerly defined the regulated organic compounds in outdoor air as “Reactive Organic Gases” (ROG). This terminology clarified its meaning as being limited to reactive chemicals. However, EPA later changed that terminology to “VOC.”

sunlight. VOC are compounds made up primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of VOC are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. The two major forms of NO_x are nitric oxide (NO) and NO_2 . NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown irritating gas formed by the combination of NO and oxygen. In addition to serving as an integral participant in ozone formation, NO_x also directly acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Ozone poses a higher risk to those who already suffer from respiratory diseases (e.g., asthma), children, older adults, and people who are active outdoor. Exposure to ozone at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggregate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (EPA 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion (ppb) of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggests that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 ppb (EPA 2019b).

In addition to human health effect, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. Ozone can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

- **Organic Gases—Precursors to Ozone** include ROGs and VOCs. Hydrocarbons (HC) are organic gases that are formed solely of hydrogen and carbon. ROGs include all HC except those exempted by CARB. VOCs are similar to ROGs in that they include all organic gases except those exempted by Federal law. Both VOCs and ROGs are emitted from incomplete combustion of HC or other carbon-based fuels. Combustion engine exhaust, oil refineries, and oil-fueled power plants are the primary sources of HC. Another source of HC is evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint. Generally speaking, and in this analysis, ROGs and VOCs are used interchangeably to refer to the HC that are a precursor to O_3 formation.

The primary health effects of HC result from the formation of O_3 and its related health effects. High levels of HC in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. There are no separate ambient air quality standards for ROGs. Carcinogenic forms of ROG/VOC are considered to be toxic air contaminants (TACs), which are described below. An example is benzene, which is a carcinogen.

- **Nitrogen dioxide** is formed by the combination of NO and oxygen through internal combustion. Long-term exposure to NO_2 can aggravate respiratory diseases, such as asthma, leading to increased hospital admissions (EPA 2019c). Controlled studies demonstrate effects (airway reactivity) among asthmatics at a short-term (less than 3 hours) exposure to 0.3 parts per

million (ppm) NO₂. Effects among healthy individuals occurred at high levels of exposure (1.5 to 2 ppm) (McConnell et al. 2002). For reference, the 1-hour CAAQS for NO₂ is 0.18 ppm (see Table 4.2-3). In addition to human health effects, NO₂ can also reduce visibility and react with water, oxygen, and other chemicals to contribute to acid rain, which can harm sensitive ecosystems (EPA 2019c).

- **Carbon monoxide** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. In the study area, high CO levels are of greatest concern during the winter, when periods of light winds combine with the formation of ground-level temperature inversions from evening through early morning. These conditions trap pollutants near the ground, reducing the dispersion of vehicle emissions. Moreover, motor vehicles exhibit increased CO emission rates at low air temperatures. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation. Exposure to CO at concentrations above the CAAQS or NAAQS (see Table 4.2-4) can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects from ambient CO (CARB 2019a).
- **Particulate matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now regulated—inhalable coarse particles, or PM₁₀, and inhalable fine particles, or PM_{2.5}. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading. Additionally, secondary formation of PM, primarily in the form of fine particulate, occurs through the chemical transformation of precursors such as NO_x, SO₂, ammonia, and VOCs.

Particulate pollution can be transported over long distances and may adversely affect humans, especially people who are naturally sensitive or susceptible to breathing problems. Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease. Other symptoms of exposure may include nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Exposure to concentrations of PM above the current ambient air quality standards may result in these health effects (EPA 2019d). Similar to O₃, the elderly and those with preexisting heart and lung diseases are at greater risk to the harmful effects of PM exposure. Children are also at increased risk because they breathe faster than adults, and therefore inhale more air per pound of body weight and tend to spend more time outdoors. The CAAQS and NAAQS for PM are set to protect these sensitive populations and define the number of particles that can be present in outdoor air without threatening the health of infants, children, or the elderly (CARB 2015). The CAAQS and NAAQS for PM are shown in Table 4.2-4.

Depending on their compositions, both PM₁₀ and PM_{2.5} can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (EPA 2019e).

- **Sulfur dioxide** is a product of fuel combustion. The predominant source of SO₂ emissions within the County is mobile source fuel combustion, primarily aircraft, ocean going vessels (OGVs), and on-road vehicles. In recent years emissions of SO₂ have been significantly reduced by the increasingly stringent controls placed on the sulfur content of fuels used in stationary sources and mobile sources. SO₂ is a precursor to fine PM formation in the form of sulfates, such as ammonium sulfate. Short-term exposure to SO₂ can aggravate the respiratory system, making breathing difficult. Controlled laboratory studies indicate that brief exposure (5 to 10 minutes)

of exercising asthmatics to an average SO₂ level of 0.4 ppm can result in increases in air resistance. Healthy adults do not show any symptoms to SO₂ at levels as high as 1 ppm, even after up to 3 hours of exposure. Based on the concentration needed to protect sensitive individuals (e.g., asthmatics), CARB and EPA have adopted the CAAQS and NAAQS for SO₂ (see Table 4.1-5) (SCAQMD 2017). In addition to public health impacts, SO₂ can also affect the environment by damaging foliage and decreasing plant growth (EPA 2019e).

- **Lead** is a soft metal that was previously added to gasoline and emitted to the environment through motor vehicle exhaust. Since lead was removed from gasoline, emissions have declined, and the primary source of emissions is now metal processing facilities and leaded aviation gasoline. Lead can also be resuspended into the air when contaminated soil or paints are disturbed. Lead emissions can be inhaled and ingested, leading to accumulation of lead particles in bone. Lead exposure can lead to cognitive function decrements, behavioral problems, kidney and heart disease, decreased immunity and red blood cell counts, and reproductive and developmental effects (CARB 2019b).

Health Effects of Criteria Air Pollutants

Criteria air pollutants are recognized to have a variety of health effects on humans. Research by CARB shows that exposure to high concentrations of air pollutants can trigger respiratory diseases—such as asthma, bronchitis, and other respiratory ailments—and cardiovascular diseases. A healthy person exposed to high concentrations of air pollutants may become nauseated or dizzy, may develop a headache or cough, or may experience eye irritation and/or a burning sensation in the chest. Ozone is a powerful irritant that attacks the respiratory system, leading to the damage of lung tissue. Inhaled PM, NO₂, and SO₂ can directly irritate the respiratory tract, constrict airways, and interfere with the mucous lining of the airways. Exposure to CO, when absorbed into the bloodstream, can endanger the hemoglobin, the oxygen-carrying protein in blood, by reducing the amount of oxygen that reaches the heart, brain, and other body tissues. When air pollutant levels are high, children, the elderly, and people with respiratory problems are advised to remain indoors. Outdoor exercise also is discouraged because strenuous activity may cause shortness of breath and chest pains. A brief summary of the criteria pollutants and their effects on human health and the environment is provided in Table 4.2-5.

Table 4.2-5. Health Effects Summary of the Major Criteria Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with NO₂ in sunlight 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases • Irritation of eyes • Impairment of cardiopulmonary function • Plant leaf injury
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust • High temperature stationary combustion • Atmospheric reactions 	<ul style="list-style-type: none"> • Aggravation of respiratory illness • Reduced visibility • Reduced plant growth • Formation of acid rain

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon containing substances, such as motor exhaust • Natural events, such as decomposition of organic matter 	<ul style="list-style-type: none"> • Reduced tolerance for exercise • Impairment of mental function • Impairment of fetal development • Death at high levels of exposure • Aggravation of some heart diseases (angina)
Particulate Matter (PM2.5 and PM10)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels • Construction activities • Industrial processes • Atmospheric chemical reactions 	<ul style="list-style-type: none"> • Reduced lung function • Aggravation of the effects of gaseous pollutants • Aggravation of respiratory and cardio-respiratory diseases • Increased cough and chest discomfort • Soiling • Reduced visibility
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels • Smelting of sulfur-bearing metal ores • Industrial processes 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema) • Reduced lung function • Irritation of eyes • Reduced visibility • Plant injury • Deterioration of metals, textiles, leather, finishes, coatings, etc.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction • Behavioral and hearing problems in children

Source: SCAQMD 2005

Toxic Air Contaminants

TACs are pollutants that have no ambient standard but pose the potential to increase the risk of developing cancer or acute or chronic health risks. The most relevant TAC associated with the proposed project is diesel particulate matter (DPM), which was established as a TAC in 1998, while some of the chemicals in diesel exhaust, such as benzene and formaldehyde, had previously been identified as TACs and listed as carcinogens under either the State's Proposition 65 or Federal Hazardous Air Pollutants program. Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is known as DPM. More than 90 percent of DPM is less than 1 micrometer (μm) in diameter (about 1/70th the diameter of a human hair), and thus is a subset of PM10 (10 μm and smaller) and PM2.5 (2.5 μm and smaller) (CARB 2021b).

For TACs like DPM that are known or suspected carcinogens, CARB has consistently found that there are no levels or thresholds below which exposure is risk-free. Therefore, no NAAQS or CAAQS exist for TACs. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment (OEHHA). Adverse health effects of TACs can be carcinogenic (cancer-causing), short-term (acute)

noncarcinogenic, and long-term (chronic) noncarcinogenic. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders.

4.2.2.4 Background Air Quality and Health Risk

Regional Criteria Pollutant Inventory and Forecast

CARB compiles annual statewide emission inventories in its emission-related information database, the California Emission Inventory Development and Reporting System (CEIDARS). Emission projections for past and future years are generated using the California Emission Projection Analysis Model (CEPAM) to track progress meeting emission reduction goals and mandates. CEPAM utilizes the most current growth and emissions control data available (and agreed upon by the stakeholder agencies) to provide comprehensive emission projections for each year from 2000 to 2035. Emissions are projected by source (e.g., mobile, stationary, area) and sub-category (e.g., light duty automobiles, electricity, and consumer products). An inventory of the 2016 and future (2030 and 2035) regional projections for the SDAB is presented in Table 4.2-6. Emissions are summarized by general source category.

Table 4.2-6. Estimate of SDAB Emissions by Source (tons per day)

Emission Source	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
2016						
Stationary	30	4	14	<1	8	2
Area	34	3	15	<1	60	11
Mobile	49	76	356	1	9	6
Natural	74	1	28	<1	3	3
Total	187	83	414	2	79	22
2030						
Stationary	33	4	15	<1	9	3
Area	37	3	17	<1	74	13
Mobile	32	45	266	1	8	5
Natural	80	4	110	2	13	11
Total	182	56	409	3	104	32
2035						
Stationary	35	4	17	<1	10	3
Area	38	2	17	<1	81	14
Mobile	30	44	265	1	8	5
Natural	80	4	110	2	13	11
Total	184	54	409	3	112	33

Source: CEPAM version 1.05 (CARB 2018a).

Note: Totals may not sum exactly due to rounding.

Regional Toxic Air Contaminants and Health Risk

Between 1990 and 2007, CARB monitored outdoor concentrations for various TACs at two sites in the SDAB: Chula Vista and El Cajon. Based on this information, CARB estimated the overall ambient risk from all pollutants in the SDAB at 607 chances per million, 420 chances per million of which

were attributed to DPM (CARB 2009). Note that DPM is not directly monitored because an accepted measurement method does not currently exist, but CARB estimated concentrations based on monitored PM10 data and the results from several studies on chemical speciation of ambient data (e.g., ratio of DPM to monitored PM10).

Local Criteria Pollutant Emissions Within the Proposed PMPU Area

As discussed in detail in Section 4.9, the proposed PMPU area comprises approximately 3,535 acres of water and 2,403 acres of land in and around the Bay and along the Imperial Beach oceanfront. Existing activities take place within the proposed PMPU area that generate criteria pollutant emissions and TACs. Each of the planning districts has a combination of unique emission sources, resulting in varying emission levels by planning district. For example, emission sources within PD4 include ocean-going vessels, refrigerated warehousing, locomotives, and shipyard activities, whereas emission sources within PD1 include motor vehicles, recreational boating slips and boat launches, and fishing vessels. A summary of general water and land uses and emission sources by planning district is given in Table 4.2-7.

Table 4.2-7. Water and Land Uses and Emissions Sources by Planning District

Planning District ¹	Water and Land Uses	Emission Sources and Types
PD1: Shelter Island	Hotels, restaurants, yacht- or marine-related businesses, fishing piers, boat launches	<ul style="list-style-type: none"> • Motor vehicles (NO_x and VOC) • Building utilities (NO_x and VOC) • Recreational and fishing vessels (NO_x, VOC, and PM)
PD2: Harbor Island	Hotels, restaurants, yacht- or marine-related businesses, airport parking, auto repair facilities, rental car facilities, Harbor Police, District headquarters	<ul style="list-style-type: none"> • Motor vehicles (NO_x and VOC) • Building utilities (NO_x and VOC) • Recreational vessels (NO_x, VOC, PM) • District-owned equipment and vessels (NO_x, VOC, and PM)
PD3: Embarcadero	Hotels, restaurants, retail, museum, marine-related businesses, fishing piers, Convention Center, public parks, cruise ship terminal, manufacturing	<ul style="list-style-type: none"> • Motor vehicles (NO_x and VOC) • Building utilities (NO_x and VOC) • Recreational and fishing vessels (NO_x, VOC, PM) • Maritime (NO_x, VOC, and PM) • Manufacturing (air toxics, NO_x, VOC, and PM)
PD4: Working Waterfront	Industrial and refrigerated warehouses, open storage, rail, marine shipping, fishing piers, public parks, ship building and repair	<ul style="list-style-type: none"> • Motor vehicles (NO_x and VOC) • Shipyard (air toxics and PM) • Maritime (NO_x, VOC, and PM) • Rail (NO_x, VOC, and PM) • Building utilities (NO_x and VOC)
PD7: South Bay	Open space wetland and natural vegetation, marshy habitat conservation area, salt evaporation ponds	<ul style="list-style-type: none"> • No emissions
PD8: Imperial Beach Oceanfront	Beach, public parks, open water	<ul style="list-style-type: none"> • Motor vehicles (NO_x and VOC)

Planning District¹	Water and Land Uses	Emission Sources and Types
PD9: Silver Strand	Beach, public parks, open water, hotel, restaurants, yacht- or marine-related businesses	<ul style="list-style-type: none"> • Motor vehicles (NO_x and VOC) • Building utilities (NO_x and VOC) • Recreational and fishing vessels (NO_x, VOC, PM)
PD10: Coronado Bayfront	Hotels, restaurants, retail, public parks, ferry landing, golf course, yacht- or marine-related businesses	<ul style="list-style-type: none"> • Motor vehicles (NO_x and VOC) • Building utilities (NO_x and VOC) • Recreational vessels (NO_x, VOC, PM)

¹ Planning District 5 and PD6 are not a part of the proposed PMPU geographic boundary (See Chapters 2 and 3 – *Environmental Setting and Project Description*)

Table 4.2-8 summarizes the existing daily criteria pollutant emissions generated by maritime commerce activity, as shown in the 2016 Maritime Air Emissions Inventory (District 2018). Note that emissions in Table 4.2-8 include activity within all planning districts, including PD5 and PD6, and match the totals in the 2016 inventory document.

Table 4.2-8. Summary of Maritime Criteria Pollutant Emissions in the Proposed PMPU Area (tons per year)

Sector	VOC	CO	NO_x	PM10	PM2.5	DPM	SO₂
Ocean-Going Vessels	20	32	323	8	7	6	15
Harbor Craft	29	183	235	8	8	8	<1
Cargo Handling Equipment	4	26	14	1	1	1	2
Freight Rail	2	8	30	1	1	1	1
On-Road Vehicles	3	12	51	<1	<1	<1	<1
Total Emissions	59	261	653	17	16	16	18

Source: 2016 Maritime Air Emissions Inventory (District 2018).

Note: Emissions include all planning districts, including those that are not a part of the PMPU geographic boundary. Totals may not sum exactly due to rounding. Emissions are as of calendar year 2016.

Local Diesel Particulate Matter Emissions Within the Proposed PMPU Area

Maritime emissions occur within District boundaries, within San Diego Bay, and outside of both the Bay and District boundaries. A summary of DPM emissions associated with maritime operations is shown in Table 4.2-9. DPM emissions are summarized for activities that occur at or near the terminals and activities that occur away from the terminals. DPM emissions are presented by planning district and are shown in pounds of DPM per year.

Sources of emissions within the District boundary and within the Bay include:

- OGV maneuvering and hoteling.
- Harbor craft activity within the harbor.
- All cargo handling equipment emissions.
- Heavy-duty truck idling and movement at the terminals, along with all new car offloading Locomotive switching.

Sources of emissions outside of the District boundary and the Bay include:

- OGV transit within and outside the vessel speed reduction (VSR) zone, along with OGV anchorage.
- Harbor craft activity outside of the harbor.
- Heavy-duty truck movements between the terminal gates and regional locations, along with all cruise ship terminal passenger car, shuttle, and bus activity.
- Locomotive line-haul between the terminals and the county line.

Table 4.2-9. Summary of Maritime Diesel Particulate Matter Pollutant Emissions by Planning District (pounds per year)

Planning District	At Terminals and Within Bay					Away from Terminal and Bay				
	OGV ¹	CHC ²	CHE	Truck	Rail	OGV	CHC	CHE	Truck	Rail
PD1: Shelter Island	--	1,457	--	--	--	--	2,536	--	--	--
PD2: Harbor Island	--	316	--	--	--	--	106	--	--	--
PD3: Embarcadero	2,337	2,247	--	--	--	1,257	1,408	--	7	--
PD4: Working Waterfront	1,384	1,715	916	17	3	425	142	--	397	32
PD7: South Bay	--	316	--	--	--	--	106	--	--	--
PD8: Imperial Beach Oceanfront	--	316	--	--	--	--	106	--	--	--
PD9: Silver Strand	--	316	--	--	--	--	106	--	--	--
PD10: Coronado Bayfront	--	757	--	--	--	--	117	--	--	--
Total	7,225	10,643	1,036	20	595	5,019	4,903	--	527	1,881
Total by Area			19,519						12,330	
Total Overall					31,849					

Source: 2016 Maritime Air Emissions Inventory (District 2018).

Note: Totals may not sum exactly due to rounding. Emissions are as of calendar year 2016.

¹ Of the DPM shown for OGVs near the terminal and within the Bay, 78–79% is at-berth (hoteling) and 21–22% is maneuvering within the harbor but away from the terminal.

² 100% of CHE activity is at the terminals.

OGV = ocean going vessels; CHC = commercial harbor craft; CHE = cargo handling equipment.

As shown, the majority of DPM emissions occur within the Bay and near the terminals, primarily due to commercial harbor craft activity, OGV hoteling at the terminals, OGV maneuvering within the Bay, and cargo handling equipment at the terminals. The only sources with a greater share outside of the terminal area are associated with truck and rail activity.

Local Health Risk near the Proposed PMPU Area

OEHHA maintains the California Communities Environmental Health Screening Tool (CalEnviroScreen), which provides a relative ranking of communities based on a selected group of environmental, health, demographic, and socioeconomic indicators. The resultant score is the relative pollution burden and vulnerabilities in one census tract compared to others; the score is not a measure of health risk. Each tract's score is then ranked relative to all areas in the state. Those areas with a high score and percentile have relatively high pollution burdens and population sensitivities; those areas with low score and percentile values have relatively lower pollution burdens and population sensitivities. Neighborhoods near PD4 represent some of the highest pollution burden rankings in the state, whereas neighborhoods near PD1 and PD10 represent some of the lowest pollution burden rankings. Thirty-eight communities in the San Diego region, including several adjacent to the proposed PMPU area, have been identified as disadvantaged and will be the target of cap-and-trade investment to improve public health, quality of life, and economic opportunity (Cal/EPA 2018).

While the results of CalEnviroScreen provide information on background pollution that allows the State to prioritize funding resources, the scoring results are not directly applicable to project-level or cumulative impact analyses required under the California Environmental Quality Act (CEQA) (Cal/EPA 2018). The information presented herein regarding CalEnviroScreen is for illustrative and informational purposes only.

The proposed PMPU area (collectively known in the Community Air Protection Program as the *Community of Portside Environmental Justice Neighborhoods* [Portside Community])² includes several census tracts with high ratings as part of the CalEnviroScreen 3.0. Rankings for the Community Air Protection Program are based on CalEnviroScreen3.0, which was adopted in January 2017. An update to CalEnviroScreen (CalEnviroScreen 4.0) was released for public review in January 2021, and a new version with revisions was released in October 2021. The Portside Community includes four census tracts that are in the 98th percentile in the state and another eight that are in the 85th percentile. Over 50,000 residents live in this area and are subject to pollution exposure (SDAPCD 2016b). The Portside Community, along with other areas selected for monitoring throughout the state, will see additional new actions through potential regulations, focused incentive investments, enforceable agreements, and engagement with local land use authorities to reduce emissions and exposure to air pollution.

4.2.3 Laws, Regulations, Plans, and Policies

The air quality management agencies of direct importance in the proposed PMPU area are EPA, CARB, and SDAPCD. EPA has established Federal air quality standards for which CARB and SDAPCD have primary implementation responsibility. CARB and SDAPCD are also responsible for ensuring that State air quality standards are met. The following sections describe the laws, regulations, plans, and policies related to air quality.

² The Community of Portside Environmental Justice Neighborhoods includes Barrio Logan and portions of National City, Sherman Heights, and Logan Heights. This includes the following census tracts: 6073005000, 6073004900, 6073003902, 6073003601, 6073003901, 6073005100, 6073003603, 6073004000, 6073003502, 6073021900, 6073004700, and 6073011602.

4.2.3.1 International Regulations

International Maritime Organization International Convention for the Prevention of Pollution from Ships Annex VI

The International Maritime Organization (IMO) International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI, which came into force in May 2005, set new international NO_x emission limits on marine engines over 130 kilowatts (kW) installed on new vessels retroactive to the year 2000. In October 2008, IMO adopted amendments to international requirements under MARPOL Annex VI, which introduced NO_x emission standards for new engines and more stringent fuel quality requirements (DieselNet 2013, IMO 2008). The Annex VI North American Emission Control Area (ECA) requirements applicable to the plan include the following.

- Caps on the sulfur content of fuel as a measure to control sulfur oxide (SO_x) emissions and, indirectly, PM emissions. For ECAs, the sulfur limits were capped at 1.0 percent starting in 2012 and 0.1 percent starting in 2015.³ The analysis herein assumes full compliance with MARPOL Annex VI SO_x limits. The proposed PMPU area is within an ECA.
- NO_x engine emission rate limits for new engines. Tier I and Tier II limits effective 2000 and 2011 are global limits, whereas Tier III limits, effective in 2016, apply only in NO_x ECAs.

4.2.3.2 Federal

Federal Clean Air Act and National Ambient Air Quality Standards

The CAA was first enacted in 1963 and has been amended numerous times in subsequent years (1967, 1970, 1977, and 1990). The CAA establishes the NAAQS and specifies future dates for achieving compliance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met. Because the Port of San Diego is within the SDAB, it is in an area designated as nonattainment for certain pollutants that are regulated under the CAA.

The 1990 amendments to the CAA identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. The sections of the CAA that are most applicable to the plan are Title I (Nonattainment Provisions) and Title II (Mobile-Source Provisions).

Title I provisions were established with the goal of attaining the NAAQS for criteria pollutants. Table 4.2-10 shows the NAAQS currently in effect for each criteria pollutant. The NAAQS were amended in July 1997 to include an 8-hour standard for O₃ and adopt a standard for PM_{2.5}. The 8-hour O₃ NAAQS was further amended in October 2015.

³ The sulfur requirements in ECAs are 1.0% as of July 2010 and 0.1% starting in January 2015. North America was designated as an ECA in August 2012, and the sulfur requirements became applicable at the time of designation.

Table 4.2-10. Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS¹	NAAQS²
Ozone (O ₃)	1 hour	0.09 ppm ³	--
	8 hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	100 ppb
	Annual Arithmetic Mean	0.030 ppm	53 ppb
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	75 ppb
	24 hour	0.04 ppm	0.14 ppm
Respirable Particulate Matter (PM ₁₀)	24 hour	50 µg/m ³	150 µg/m ³
	Annual Arithmetic Mean	20 µg/m ³	--
Fine Particulate Matter (PM _{2.5})	24 hour	--	35 µg/m ³
	Annual Arithmetic Mean	12 µg/m ³	12.0 µg/m ³
Sulfates	24 hour	25 µg/m ³	--
Lead (Pb)	30 day average	1.5 µg/m ³	--
	Calendar quarter	--	1.5 µg/m ³
	Rolling 3-Month Average	--	0.15 µg/m ³
Hydrogen Sulfide	1 hour	0.03 ppm	--
Vinyl Chloride	24 hour	0.01 ppm	--

Source: CARB 2016a.

¹ The CAAQS for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, PM₁₀, and PM_{2.5} are values not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

² The NAAQS, other than O₃ and those based on annual averages, are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For PM_{2.5}, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, is equal to or less than the standard.

EPA Emission Standards

EPA has adopted regulations to limit emission from all sources of emissions. EPA regulates the emissions from mobile sources by setting standards for the specific pollutants being emitted. Emissions standards set limits on the amount of pollution a vehicle or engine can emit. Mobile source emission standards have been established for light-duty vehicles, trucks, and motorcycles; heavy duty trucks; and non-road engines, including aircraft, locomotives, marine vessels, and recreational engines and vehicles. The EPA has also established gasoline and diesel fuel standards (EPA 2017).

The following describes the emission standards for sources analyzed in this PEIR.

Large Marine Diesel Engines—Category 3 Engines

Category 3 engines have engine displacements per cylinder greater than 30 liters. Category 3 engines are propulsion engines on OGVs. To reduce emissions from these engines, EPA established 2003 Tier 1 NO_x standards for marine diesel engines above 30 liters per cylinder, and large Category

3 marine propulsion engines on U.S. flagged OGVs (40 Code of Federal Regulations [CFR] Parts 9 and 94) (68 *Federal Register* [FR] 9745–9789). The standards went into effect for new engines built in 2004 and later. Tier 1 limits were achieved by engine-based controls, without the need for exhaust gas after-treatment.

In December 2009, EPA adopted Tier 2 and Tier 3 emissions standards for newly built Category 3 engines installed on U.S. flagged vessels, as well as marine fuel sulfur limits. The Tier 2 and 3 engines standards and fuel limits are equivalent to the amendments to MARPOL Annex VI. Tier 2 NO_x standards for newly built engines applied beginning in 2011 and require the use of engine-based controls, such as engine timing, engine cooling, and advanced electronic controls. Tier 3 standards began in 2016 in ECAs and are met with the use of high-efficiency emission control technology, such as selective catalytic reduction. The Tier 2 standards are anticipated to result in a 15–25 percent NO_x reduction below the Tier 1 levels; Tier 3 standards are expected to achieve NO_x reductions 80 percent below the Tier 1 levels (DieselNet 2013). In addition to the Tier 2 and Tier 3 NO_x standards, the final regulation established standards for hydrocarbons and CO.

Locomotives

To reduce emissions from switch and line-haul locomotives, EPA established a series of increasingly strict emission standards for new or remanufactured locomotive engines (63 FR 18997–19084). Tier 0 standards, effective as of 2000, applied to engines manufactured or remanufactured from 1973 to 2001. Tier 1 standards applied to engines manufactured/remanufactured from 2002 to 2004. Tier 2 standards applied to engines manufactured/remanufactured after 2004.

In 2008, EPA strengthened the Tier 0 through 2 standards to apply to existing locomotives and introduced more stringent Tier 3 and 4 emission requirements (73 FR 88 25098–25352). Tier 3 standards, met by engine design methods, were phased in between 2011 and 2014. Tier 4 standards, which are expected to require exhaust gas after-treatment technologies, became effective starting in 2015 (DieselNet 2015).

Non-Road Diesel Engines

To reduce emissions from non-road diesel equipment, EPA established a series of increasingly strict emission standards for new non-road diesel engines. Tier 1 standards were phased in on newly manufactured equipment from 1996 through 2000 (year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in on newly manufactured equipment from 2001 through 2006. Tier 3 standards were phased in on newly manufactured equipment from 2006 through 2008. Tier 4 standards, which require advanced emission control technology to attain them, were phased in between 2008 and 2015.

Non-Road Diesel Fuel Rule

With this rule, EPA set sulfur limitations for non-road diesel fuel, including large recreational vessels, locomotives, and harbor craft that frequent the Port of San Diego. This rule affects the diesel-powered recreational and excursion vessels that visit the proposed PMPU area. Under this rule, the diesel fuel was limited to 500 ppm starting June 1, 2007, and further limited to 15 ppm sulfur content (ultra-low-sulfur diesel) starting January 1, 2010, for non-road fuel, and June 2012 for marine fuels (EPA 2004).

On-Road Diesel Fuel Rule

In December 2000, EPA signed the Heavy-Duty Highway Rule, which reduces emissions from on-road, heavy-duty diesel trucks by establishing a series of increasingly strict emission standards for new engines. Manufacturers were required to produce new diesel vehicles that meet PM and NO_x emission standards beginning with model year 2007 with the phase-in period being between 2007 and 2010. The phase-in was based on a percent-of-sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010 (EPA 2000).

Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy Standards (CAFÉ) were first enacted in 1975 to improve the average fuel economy of cars and light duty trucks.

On August 2, 2018, the National Highway Traffic Safety Administrative (NHTSA) and EPA proposed to amend the fuel efficiency standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026 by maintaining the current model year 2020 standards through 2026 (Safer Affordable Fuel-Efficient [SAFE] Vehicles Rule). On September 19, 2019, EPA and NHTSA issued a final action on the One National Program Rule, which is consider Part One of the SAFE Vehicles Rule and a precursor to the proposed fuel efficiency standards. The One National Program Rule enables EPA/NHTSA to provide nationwide uniform fuel economy and greenhouse gas (GHG) vehicle standards, specifically by (1) clarifying that Federal law preempts state and local tailpipe GHG standards, (2) affirming NHTSA's statutory authority to set nationally applicable fuel economy standards, and (3) withdrawing California's CAA preemption waiver to set State-specific standards.

EPA and NHTSA published their decisions to withdraw California's waiver and finalize regulatory text related to the preemption on September 27, 2019 (84 FR 51310). California, 22 other states, the District of Columbia, and two cities filed suit against Part One of the SAFE Vehicles Rule on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826, U.S. District Court for the District of Columbia). On October 28, 2019, the Union of Concerned Scientists, Environmental Defense Fund (EDF), and other groups filed a protective petition for review after the Federal government sought to transfer the suit to the D.C. Circuit (*Union of Concerned Scientists v. National Highway Traffic Safety Administration*). Opening briefs for the petition are currently scheduled to be completed on November 23, 2020. The lawsuit filed by California and others is stayed pending resolution of the petition.

EPA and NHTSA published final rules to amend and establish national CO₂ and fuel economy standards on April 30, 2020 (Part Two of the SAFE Vehicles Rule) (85 FR 24174). The revised rule changes the national fuel economy standards for light duty vehicles from 50.4 mpg to 40.5 mpg in future years. This new rule rolls back California fuel efficiency standards for on-road passenger vehicles. California and 22 other states are currently challenging this new rule in the court system, and it is probable that the State will be successful in its legal challenges, for the reasons outlined in the State's lawsuit⁴ and on the CARB website (CARB 2021b). In August 2021, NHTSA and EPA proposed to revise the fuel economy and GHG emissions standards for passenger cars and light

⁴ *State of California et al. v. Chao et al.* (Case 1:19-cv-02826) available at: https://oag.ca.gov/system/files/attachments/press_releases/California%20v.%20Chao%20complaint%20%280000002%29.pdf

trucks for Model Years 2023–2026, and a Draft Supplemental Environmental Impact Statement was released for public review that month. Additionally, NHTSA and EPA will begin work to develop fuel economy standards for passenger cars and light duty trucks for model years 2027–2030, as well as heavy-duty fuel efficiency standards beginning as early as model year 2027 (NHTSA 2021a, NHTSA 2021b).

Federal Hazardous Air Pollutant Regulations

The 1990 Amendments to the CAA included a provision to address air toxics and hazardous air pollutants (HAPs). Under Title III of the CAA, EPA establishes and enforces National Emission Standards for Hazardous Air Pollutants (NESHAPs), which are nationally uniform standards oriented toward controlling particular HAPs. Section 112(b) of the CAA identifies 189 “Air Toxics” (HAPs, since modified to 187 pollutants), directs EPA to identify sources of the HAPs, and establishes a 10-year time period for EPA to issue technology-based emissions standards for each source category. Emission standards have been developed for all of the stationary source categories under 40 CFR 63. Title III of the CAA provides for a second phase under which EPA is to assess residual risk after the implementation of the first phase of standards and impose new standards, when appropriate, to protect public health.

In 2011, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-cancer hazard contributors from the National Air Toxics Assessment (EPA 2018). These significant contributors include 1,3-butadiene, acetaldehyde, acrolein, benzene, DPM, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While the Federal Highway Administration (FHWA) considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules (FHWA 2016).

4.2.3.3 State

Clean Air Act

The California CAA, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. The CAAQS incorporate additional standards for most of the criteria pollutants and set standards for other pollutants recognized by the State. In general, the California standards are more health protective than the corresponding NAAQS. California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Table 4.2-10 shows the CAAQS currently in effect for each criteria pollutant.

CARB and local air districts bear responsibility for achieving California’s air quality standards, which are to be achieved through district-level air quality management plans that would be incorporated into the SIP. In California, EPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB traditionally has established State air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The California CAA substantially adds to the authority and responsibilities of air districts. The California CAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control

measures. The California CAA also emphasizes the control of “indirect and area-wide sources” of air pollutant emissions. The California CAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

Toxic Air Contaminants Regulations

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

California regulates TACs primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Toxic Air Contaminant Identification and Control Act (AB 1807) created California’s program to reduce exposure to air toxics. The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. In August 1998, CARB identified particulate emissions from diesel-fueled engines as TACs. In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. As an ongoing process, CARB reviews air contaminants and identifies those that are classified as TACs. CARB also continues to establish new programs and regulations for the control of TACs, including DPM, as appropriate. Among the programs and strategies CARB has developed to reduce diesel emissions for various sources, many are applicable to sources that are present at the Port, including off-road sources (cargo-handling equipment, locomotives, construction equipment), on-road trucks (drayage trucks), and marine vessels (harbor craft, OGVs, and shore power).

Senate Bill 535 and Assembly Bill 1550

Senate Bill (SB) 535, signed into law in 2012, requires the California Environmental Protection Agency (Cal/EPA) to identify disadvantaged communities based on geographic, socioeconomic, public health, and environmental hazard criteria. It also requires that the investment plan developed and submitted to the Legislature pursuant to AB 1550 allocate no less than 25 percent of available proceeds from the carbon auctions held under AB 32 to projects that will benefit these disadvantaged communities. At least 10 percent of the available funds from these auctions must be directly invested in such communities. Because CalEnviroScreen has been developed to identify areas disproportionately affected by pollution and those areas whose populations are socioeconomically disadvantaged, it is well suited for the purposes described by SB 535 (Cal/EPA 2017).

Assembly Bill 617

AB 617, signed into law in 2017, established the Community Air Protection Program (CAPP), which requires new community-focused and community-driven action to reduce air pollution and improve public health in communities that experience disproportionate burdens from exposure to air pollutants. Communities identified for monitoring include the Portside Environmental Justice Neighborhoods of Barrio Logan as well as portions of National City, Sherman Heights, and Logan Heights. The SDAPCD will implement the CAPP in San Diego County, which will eventually lead to additional pollution monitoring and additional requirements through the following: accelerated installation of pollution controls on industrial sources like oil refineries, cement plants, and glass manufacturers; expanded air quality monitoring within communities; increased penalties for violations of emissions control limits; and greater transparency and improved public access to air

quality and emissions data through enhanced online web tools (SDAPCD 2016b). The AB 617 Steering Committee includes local stakeholders, technical and scientific experts, and members of local industry. In December 2019, CARB selected the Portside Community⁵ for a Community Emissions Reduction Program (CERP). The purpose of the CERP is to focus and accelerate new actions that go beyond existing State and regional programs to provide direct reductions in air pollution emissions and exposure within Portside communities. The CERP was presented in two phases. Phase I includes actions that have been fully developed and supported by all jurisdictions or organizations that have an implementation role. The Phase I Draft CERP was released in September 2020. The Phase II CERP was finalized by SDAPCD in July 2021, and includes 11 goals and 39 actions to achieve these emission reductions. Goals include reducing TAC emissions in the community, supporting electric freight truck infrastructure and upgrades, quantifying health risk from port and non-port activities, establishing health risk reduction goals, and implementing actions to achieve those goals (SDAPCD 2021b). The Portside Community's CERP was adopted by CARB's governing board in October 2021 (CARB 2021c). See a more detailed discussion of the CERP for the Portside communities under Section 4.2.3.4, *Local*, below

Diesel Fuel Regulation

With this rule, CARB set sulfur limitations for diesel fuel sold in California for use in on- and off-road motor vehicles (13 California Code of Regulations [CCR] 2281–2285, 17 CCR 93114). Under the rule, diesel fuel used in motor vehicles except harbor craft and intrastate locomotives has been limited to 500 ppm sulfur since 1993. The sulfur limit was reduced to 15 ppm on September 1, 2006. A Federal diesel rule similarly limited sulfur content nationwide to 15 ppm by October 15, 2006.

CARB Agreements with Class I Freight Railroads

1998 South Coast Locomotive Emissions Agreement

In 1998, CARB, Class I freight railroads operating in the SCAB (BNSF and Union Pacific Railroad [UP]), and EPA signed the 1998 Memorandum of Understanding (MOU), agreeing to a locomotive fleet average emissions program. The 1998 MOU required that, by 2010, the Class I freight railroad fleet of locomotives in the SCAB achieve average emissions equivalent to the NO_x emission standard established by EPA for Tier 2 locomotives (5.5 grams per brake horsepower-hour). BNSF and UP must continue to comply with the Tier 2 locomotive fleet average from 2010 to 2030. The MOU applies to both line-haul (freight) and switch locomotives operated by the railroads (CARB 1998). This MOU also provides emission reductions at the Port of San Diego because all trains arrive from and depart to the SCAB. As of 2014, BNSF's NO_x emission level is 5.2 grams per brake horsepower-hour, which is better than the MOU requirement.

2005 Railroad Statewide Agreement

In 2005, CARB, Class I freight railroads operating in the SCAB, and EPA signed the 2005 MOU agreeing to several program elements intended to reduce the emission impacts of railyard operations on local communities. The 2005 MOU includes a locomotive idling-reduction program, early introduction of lower-sulfur diesel fuel in interstate locomotives, and a visible emission

⁵ The Portside Community includes the neighborhoods of Barrio Logan, Logan Heights, and Sherman Heights in the City of San Diego, and West National City within National City.

reduction and repair program. The 2005 agreement also required a number of efforts to gather information and assess advanced technologies to further reduce locomotive and railyard emissions in the future, including the preparation of emission inventories and health risk assessments at the 17 major railyards in the state (including San Diego Railyard), community and air district involvement, evaluation and development of measures to further reduce impacts on local communities, and ongoing efforts to evaluate and assess advanced control technologies (CARB 2005b).

CARB Measures to Reduce Emissions from Goods Movement Activities

The majority of rules and regulations adopted to reduce emissions from goods movement have been focused on reducing the direct human health effects of emissions (e.g., localized sources of PM₁₀ and PM_{2.5}) as well as to attain air quality standards (e.g., reduce NO_x to meet O₃ NAAQS).

Emission Reduction Plan for Ports and Goods Movement in California

In April 2006, CARB approved the Emission Reduction Plan for Ports and Goods Movement in California (CARB 2006). This plan proposes measures that would reduce emissions from the main sources associated with port cargo-handling activities, including ships, harbor craft, terminal equipment, trucks, and locomotives. This effort was a step in implementing the Goods Movement Action Plan developed by the California Business, Transportation, and Housing Agency and Cal/EPA. The final Goods Movement Action Plan was released on January 11, 2007, and includes measures to address the various layers of the goods movement system throughout the state such as freeways, rail, and ports. The primary goal of the Goods Movement Action Plan is to reduce community exposure to air pollution and to meet Federal air quality standards for O₃ and PM_{2.5}. Most activities and regulations implemented at the State level to reduce emissions from activities related to goods movement can be traced to the Goods Movement Action Plan. Since its adoption, the State has adopted various regulations to reduce emissions and community exposure to air pollution, including but not limited to those reductions discussed below.

Airborne Toxic Control Measure for Diesel-Fueled Transport Refrigeration Units, Generator Sets, and Facilities Where Transport Refrigeration Units Operate

In 2011, CARB amended the 2004 rule designed to reduce the DPM emissions from in-use Transport Refrigeration Units (TRUs) and TRU generator set engines (13 CCR 2477). Under the rule, TRU engines are required to meet in-use performance standards by installing the required level of verified diesel emission control strategy or using an alternative technology. Compliance may also be maintained by replacing the engine with a cleaner new or rebuilt engine.

The in-use performance standards have two levels of stringency (Low Emission and Ultra Low Emission in-use performance standards) that are phased in per the compliance schedule set forth in the rule.

Regulations for Fuel Sulfur and Other Operational Requirements for OGVs Within California Waters and 24 Nautical Miles of the California Baseline

In July 2008, CARB approved the Regulation for Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline (13 CCR 2299.2). These regulations have required ship main engines, auxiliary engines, and

auxiliary boilers operating in California waters since July 2009 to either use marine diesel oil with a maximum sulfur content of 0.5 percent or marine gas oil with a maximum sulfur content of 1.5 percent. By August 1, 2012, these source activities were required to meet a marine diesel oil limit of 0.5 percent or marine gas oil limit of 1.0 percent. By January 1, 2012, these source activities were required to meet a marine diesel or gas oil sulfur limit of 0.1 percent, which is now in effect.

Regulation to Reduce Emissions from Diesel Auxiliary Engines on OGVs While at Berth at a California Port

In December 2007, CARB adopted this regulation to reduce emissions from diesel auxiliary engines on OGVs while at berth for container, passenger cruise, and refrigerated cargo vessels (17 CCR 93118.3). The regulation requires that auxiliary diesel engines on OGVs (while at berth for container, passenger cruise, and refrigerator cargo vessels) be shut down for specified percentages of a fleet's visits and also for the fleet's at-berth auxiliary engine power generation to be reduced by the same percentages. Vessels can either plug into the electrical grid (i.e., shore power, otherwise known as cold-ironing or alternative maritime power) or use an alternative emission control device. The law sets compliance percentages that phase in over time. By 2014, vessel operators were required to shut down their auxiliary engines at berth for 50 percent of the fleet's vessel visits and also reduce their onboard auxiliary engine power generation by 50 percent. The specified percentages increased to 70 percent in 2017 and will increase to 80 percent in 2020. Vessel operators can also choose an emissions reduction equivalency alternative; the regulation requires a 10 percent reduction in OGV hoteling emissions starting in 2010, increasing in stringency to an 80 percent reduction by 2020 (CARB 2007). Note that in developing the at-berth regulation, CARB weighed three main factors in evaluating a vessel category: the frequency which a vessel visited a port, the time a vessel stays in port, and the power usage while docked. Based on these criteria, the at-berth regulation affects only container ships, passenger ships, and refrigerated-cargo ships at Los Angeles, Long Beach, Oakland, San Diego, San Francisco, and Hueneme (CARB 2013a). As noted, this regulation does not apply to auto carrier, roll-on/roll-off (RoRo), bulk carrier, or general cargo vessels.

In August 2020, CARB amended the regulation to extend the at-berth requirement to auto carriers, and RoRo vessels in 2025, tanker ships that visit the Ports of Los Angeles and Long Beach starting in 2025, and tanker ships that visit all other ports in 2027, while removing various exceptions that previously applied to container ships, refrigerated cargo ships, and passenger ships. Bulk and general cargo ships remain exempt.

Mobile Cargo-Handling Equipment at Ports and Intermodal Rail Yards

In December 2005, CARB approved the Regulation for Mobile Cargo-Handling Equipment at Ports and Intermodal Rail Yards (13 CCR 2479) designed to use best available control technology (BACT) to reduce diesel PM and NO_x emissions from mobile cargo-handling equipment at ports and intermodal rail yards. Since January 1, 2007, the regulation has imposed emission performance standards on new and in-use terminal equipment that vary by equipment type. The regulation also includes recordkeeping and reporting requirements.

In March 2018, CARB staff announced a plan to amend the regulation yet again to transition cargo handling equipment (CHE) to zero emissions by developing a regulation to minimize emissions and community health impacts. CARB staff plans to bring the amendment to its Board in 2022 with implementation to begin in 2026.

Commercial Harbor Craft Regulation

The Commercial Harbor Craft (CHC) regulation was adopted in 2007 to reduce emissions from diesel engines operating within 24 miles of the California coast (Regulated California Waters). The rule was amended in 2010 and will be fully implemented by 2022. The rule includes regulations for CHC vessels including ferries, tugboats, towboats, excursion vessels, crew and supply vessels, pilot vessels, work boats, and commercial and charter fishing boats (CARB 2020a).

Emission Standards and Test Procedures for Large Spark Ignition Engine Forklifts and Other Industrial Equipment

Since 2007, CARB has promulgated more stringent emissions standards for hydrocarbons and NO_x combined emissions and test procedures. The engine emission standards and test procedures were implemented in two phases. The first phase was implemented for engines built between January 2007 and December 2009. The second, more stringent, phase was implemented for engines built starting in January 2010. The regulation was amended in 2010, establishing fleet average emissions requirements for existing engines.

California Drayage Truck Regulation

CARB adopted the drayage truck regulation in December 2007 to modernize the class 8 drayage truck fleet (trucks with a Gross Vehicle Weight Rating [GVWR] greater than 33,000 pounds) in use at California's ports. Emergency vehicles and yard trucks are exempted from this regulation. The regulatory objective is to be achieved in two phases. By December 31, 2009, pre-1994 model year engines were to be retired or replaced with 1994 and newer model year engines. In addition, all drayage trucks with 1994 to 2003 model year engines were required to achieve an 85 percent PM emission reduction through the use of an CARB-approved Level 3 verified diesel emission control strategy. By December 31, 2013, all trucks operating at California ports must have complied with the 2007 and newer on-road heavy-duty engine standards.

In December 2010, CARB amended the regulation to include Class 7 drayage trucks with a GVWR between 26,000 and 33,001 pounds. CARB further expanded the definition of drayage trucks to include dray-off's, those non-compliant trucks that may not directly come to the ports to pick up/drop off cargo but that engage in moving cargo destined to or originating from port facilities and to/from near-port facilities or railyards (CARB 2013b).

On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation—Truck and Bus Regulation

In December 2011, CARB amended the existing 2008 Statewide Truck and Bus Regulation to modernize in-use heavy-duty vehicles operating throughout the state. Under this regulation, existing heavy-duty trucks are required to be replaced with trucks meeting the latest NO_x and PM BACT, or be retrofitted to meet these levels.

Trucks with a GVWR less than 26,000 pounds (most construction trucks) are required to replace engines with 2010 or newer engines, or equivalent, by January 2023. Trucks with a GVWR greater than 26,000 pounds (most drayage trucks) must meet PM BACT and upgrade to a 2010 or newer model year emissions equivalent engine pursuant to the compliance schedule set forth by the rule. By January 1, 2023, all model year 2007 class 8 drayage trucks are required to meet NO_x and PM BACT (i.e., EPA 2010 and newer standards) (CARB 2011).

On-Road Heavy-Duty Diesel Vehicle Idling Emission Reduction Regulation

CARB adopted this airborne toxic control measure (ATCM) in 2005 to limit diesel-fueled commercial motor vehicle idling. This regulation states that diesel vehicles with GVWR greater than 10,000 pounds shall not idle the vehicle's diesel-powered primary or auxiliary power system for greater than 5 minutes at any location (13 CCR 1956.8 and 2485). This regulation applies to all trucks used that visit the Port.

Sustainable Freight Action Plan

The Sustainable Freight Action Plan (Sustainable Freight Action Plan or Action Plan) provides an integrated action plan that establishes clear targets to improve freight efficiency, transition to zero-emission technologies, and increase the competitiveness of California's freight system. The Action Plan was developed by several State agencies and is a recommendation document that integrates investments, policies, and programs across several State agencies to help realize a singular vision for California's freight transport system. This Action Plan provides a recommendation on a high-level vision and broad direction to the Governor to consider for State agencies to utilize when developing specific investments, policies, and programs related to the freight transport system that serves California's transportation, environmental, and economic interest. Furthermore, the CARB 2017 Scoping Plan incorporates potential actions from the Action Plan that provide GHG emissions reduction benefits (CARB 2016b).

CARB is working on various strategies to improve freight efficiency and transition to zero-emission technologies, and increase competitiveness of California's freight system. The Action Plan will also identify State policies, programs, and investments to achieve these targets. The plan will be informed by existing State agency strategies, including the California Freight Mobility Plan, Sustainable Freight Pathways to Zero and Near-Zero Emissions Discussion Document, and Integrated Energy Policy Report, as well as broad stakeholder input. The Sustainable Freight: Pathways to Zero and Near-Zero Emissions Discussion Document sets out CARB's vision of a clean freight system, together with the immediate and near-term steps that CARB will take to support use of zero and near-zero emission technology to improve air quality and reduce health risk associated with goods movement.

Tractor-Trailer Greenhouse Gas Regulation

CARB approved the Tractor-Trailer Greenhouse Gas Regulation to reduce GHG emissions by requiring the use of aerodynamic tractors and trailers that are also equipped with low rolling resistance tires. The regulation applies to certain Class 8 tractors manufactured for use in California and is harmonized with the parallel EPA and NHTSA Phase 1 heavy-duty truck standards. CARB amended the Tractor-Trailer Greenhouse Gas Regulation in 2016 to align with EPA and NHTSA Phase 2 heavy-duty truck standards.

Advanced Clean Truck Regulation

CARB adopted the Advanced Clean Truck Regulation in June 2020 to accelerate a large-scale transition of zero-emission medium- and heavy-duty vehicles. The regulation requires the sale of zero-emission medium- and heavy-duty vehicles as an increasing percentage of total annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b-3 truck sales, 75 percent of Class 4-8 straight truck sales, and 40 percent of

truck tractor sales. Large employers including retailers, manufacturers, brokers, and others are required to report information about shipments and shuttle services to better ensure that fleets purchase available zero-emission trucks.

Executive Order N-79-20

Under Executive Order (EO) N-79-20, 100 percent of in-state sales of new passenger cars and trucks are to be zero-emission by 2035; 100 percent of in-state sales of medium- and heavy-duty trucks and buses are to be zero-emission by 2045 for all operations, where feasible, and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment sales are to be zero-emission by 2035 where feasible. EO N-79-20 directs CARB to partner with the Governor's Office of Business and Economic Development and other agencies to develop a Zero-Emissions Vehicle Market Development Strategy, which was released in February 2021 (Governor's Office of Business and Economic Development 2021).

Fuel Economy Standards

Pavley I and II

AB 1493 (known as Pavley I) provided the nation's first GHG standards for automobiles. AB 1493 required CARB to adopt vehicle standards that will lower GHG emissions from new light-duty automobiles to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as Pavley II and now referred to as the Advanced Clean Cars [ACC] measure) was adopted for vehicle model years 2017–2025 in 2012.

The SAFE Vehicle Rule Part One (discussed above) revokes California's authority to set its own GHG emissions standards and establish zero-emission vehicle (ZEV) mandates in California, which affects some of the underlying assumptions in CARB's EMFAC models. CARB staff has developed guidance and adjustment factors to apply that needs to be applied to EMFAC emissions outputs to adjust for the revised (reduced) ZEV sales in future years and associated increase in emissions.

Low Carbon Fuel Standard

The Low Carbon Fuel Standard (LCFS) mandates a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In September 2018, the LCFS regulation was amended to increase the statewide goal to a 20 percent reduction in carbon intensity of California's transportation fuels by at least by 2030. Note that while the LCFS regulation was amended and extended to ensure compliance with the 2030 Scoping Plan, CARB ultimately adopted a more stringent target (20 percent reduction in carbon intensity by 2030) than assumed in the 2030 Scoping Plan (18 percent reduction in carbon intensity by 2030). Therefore, future updates to the Scoping Plan are likely to include the more stringent version of the LCFS that was adopted by CARB. Note that the majority of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe).

Electric Vehicles

Zero-Emission Vehicle Program

The ZEV program is part of CARB's ACC package of coordinated standards that controls smog-causing pollutants and GHG emissions of passenger vehicles in California.

The program requires the largest automotive manufacturers (referred to as OEMs) to manufacture and deliver for sale in California a sufficient number of ZEV credit-producing vehicles (battery electric, plug-in hybrid electric, and fuel cell electric vehicles) such that each OEM attains specific ZEV credit and minimum ZEV floor percentages depending on the average of their overall annual in-state vehicle (passenger car and light-duty trucks) sales over a preceding 3-year period. The requisite ZEV credit and minimum ZEV floor percentages ramp up gradually through model year 2025.

Executive Order B-48-18

EO B-48-18 set targets of 200 hydrogen fueling stations and 250,000 electric vehicle (EV) chargers to support 1.5 million ZEVs by 2025, and put California on a path to 5 million ZEVs by 2030.

4.2.3.4 Local

San Diego Unified Port District Plans and Programs

The current Port Master Plan (PMP) is the governing land use document for physical development within the District; however, there are also other District programs that apply to air quality, and the District's Climate Action Plan has co-benefits to air quality.

The District adopted a Clean Air Program in 2007 with the goal of reducing air pollution from Port-related operations. In June 2019, the Board of Port Commissioners (Board) adopted Resolution No. 2019-084, which authorizes staff to update the District's 2007 Clean Air Program to align with the AB 617 Program, as well as other local and State initiatives that are designed to improve air quality. The resolution also directs staff to develop District-related plans, projects, and strategies to improve air quality in advance of project funding and to collaborate with partner agencies, tenants, and stakeholders to improve regional air quality.

The District installed California's first shore power system for passenger ships at the B Street Cruise Terminal in 2010, 4 years ahead of CARB's At-Berth Regulation. In 2014, the District installed shore power at the Tenth Avenue Marine Terminal (TAMT) to service refrigerated container vessels.

On April 13, 2021, the Board allocated funding to expand existing shore power capabilities at the CST to provide shore power to two cruise vessels simultaneously while at berth. This action will enable essentially all cruise ships that visit the Port to use shore power beginning on January 1, 2023, in accordance with CARB's updated At-Berth Regulation.

In addition, CARB's updated At-Berth Regulation requires RoRo vessels to use shore power beginning in 2025, and to submit a terminal compliance plan that explains how the terminal plans to comply with the updated At-Berth Regulation in December 2021. The District is currently working with Pasha Automotive (the terminal operator at the National City Marine Terminal) to complete the terminal compliance plan, as required by CARB.

Maritime Clean Air Strategy

The Maritime Clean Air Strategy (MCAS) is a strategic planning document, identifying goals and objectives that are consistent with the Board's and District's vision of health equity and a clean, sustainable, and modern seaport. The MCAS is intended to guide future decision-making and provide a planning framework for potential future actions that may be implemented to achieve the goals and objectives identified in the MCAS.

The MCAS identifies a vision of *Health Equity for All*, sets an ambitious overarching goal of 100% Zero Emissions Trucks and Cargo Handling Equipment by 2030, and includes shorter term goals and objectives (through 2030). To reach the vision and overarching goal The MCAS identifies ways of reducing emissions for the seven maritime-related emission sources (cargo handling equipment, commercial harbor craft, shipyards, heavy-duty trucks, Port fleet, OGVs, and rail) as well as three additional stakeholder priorities (community enrichment, public health, and enabling actions).

The underling intent of the MCAS is to reduce air pollutants and improve air quality in around the working waterfront/portside communities. Along with the ambitious overarching goal of 100% Zero Emissions Trucks and Cargo Handling Equipment by 2030, the MCAS includes goals for harbor craft (transitioning ferries and assist tugs to zero or near-emission technologies), the Port's fleet (transition motor vehicles beginning in 2022, beginning transition of emergency vehicles and equipment [forklifts and lawn maintenance equipment] to zero emissions, and seek opportunities to advance lower emitting solutions for marine vessels), and OGVs (expand vessel speed reduction and shore power)

The MCAS includes two short-term goals for 2030 and complementary long-term goals. Short term goals for 2030 include the following:

- **Long-Term Goal for Trucks:** In advance of the State's goals identified in Executive Order No. N-79-20, attain 100 percent zero-emission truck trips by 2030 for all trucks that call to the Port's two marine cargo terminals.
- **Long-Term Goal for Cargo Handling Equipment:** In advance of the State's goals identified in Executive Order No. N-79-20, the transition of diesel cargo handling equipment to 100 percent zero-emission equipment by 2030.

Long-term goals include the following:

- **Long-Term Goal for Harbor Craft:** Tugboat-related DPM emissions identified in the District's Emissions Inventory (2019) will be reduced by half by transitioning to zero-emission/near-zero-emission technologies and/or other lower-emitting engines or alternative fuels.
- **Long-Term Goal for Port Fleet:** Transition Port-owned fleet of vehicles and equipment to zero-emission/near-zero-emission technologies in manner that meets operational needs and reduces emissions, as outlined below:
 - Beginning in 2022, transition light-, medium-, and heavy-duty vehicles to zero-emission vehicles.
 - Transition emergency vehicles to alternative fuels, including hybrid, electric, and/or low carbon fuels.
 - Convert equipment, such as forklifts and lawn maintenance equipment, to zero-emissions equipment.

- Seek opportunities to advance lower-emitting solutions for marine vessels.
- **Long-Term Goal for Ocean-Going Vessels:** Equip marine terminals with shore power and/or an alternative technology to reduce ocean-going vessel emissions for ships that call to the Port.

The MCAS is intended to keep the District in front of and go beyond State regulations. The MCAS will serve as a living document, and the District will regularly report to the Board, including comprehensive updates every 2 years. The measures in the MCAS may change over time, based on Board direction or as technology improvements occur.

The draft revised MCAS was released for public review in August 2021, and it was adopted by the District Board in October 2021. The goals and strategies will guide the District's investments in zero-emissions technology and electrification and will allow the District to help tenants and terminal operators prioritize replacements over time. As noted in the MCAS document, the MCAS is intended to guide future decision-making and provide a planning framework for potential future actions that may be implemented to achieve the goals and objectives identified in the MCAS. The MCAS focuses on maritime and shipyard activities. Measures from both the MCAS and potentially the CERP will be applicable to new projects as they arise.

San Diego Air Pollution Control District Plans, Rules, and Regulations

Local air pollution control districts have the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations in San Diego County.

Regional Air Quality Strategy and State Implementation Plan

CARB, SDAPCD, and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. As discussed in Section 4.2.2.2, *Air Quality Conditions*, air quality has improved for a number of criteria pollutants over the previous decades despite increases in population and associated vehicle trips. San Diego County is currently in nonattainment for O₃ under the NAAQS and for O₃, PM₁₀, and PM_{2.5} under the CAAQS.

The San Diego Regional Air Quality Strategy (RAQS) outlines SDAPCD's plans and control measures designed to attain and maintain the State standards, while San Diego's portions of the SIP are designed to attain and maintain Federal standards. The RAQS was initially adopted in 1991 and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, 2009, and most recently in December 2016 (SDAPCD 2016b). The RAQS does not currently address the State air quality standards for PM₁₀ or PM_{2.5}. SDAPCD has also developed the air basin's input to the SIP, which is required under the Federal CAA for areas that are out of attainment of air quality standards. The most recent Federal plan is the 2020 Plan for Attaining the National Ozone Standards (2020 SIP), while the previous plan was the 2016 Plan for Attaining the National Ozone Standards (2016 SIP). Both the RAQS and SIPs demonstrate the effectiveness of CARB measures (mainly for mobile sources) and SDAPCD's plans and control measures (mainly for stationary and area-wide sources) for attaining the O₃ NAAQS (SDAPCD 2020b). For the 8-hour O₃ standard, the 2016 SIP outlines SDAPCD's portion of the SIP, and also outlines plans and control measures designed to attain and maintain the 8-hour O₃ NAAQS (2008 standard). The 2020 SIP outlines plans and control measures

designed to attain and maintain the 8-hour O₃ NAAQS (2008 and 2015 standards). As of October 2021, the 2020 SIP is awaiting EPA approval and remains in draft form.

RAQS and SIP Reduction Measures

Both the RAQS and SIP include various control measures to reduce VOC and NO_x emissions. The RAQS and SIP include measures to reduce emissions from stationary, area, and mobile sources. Stationary and area source measures include vapor recovery, solvents, turbines, boilers, and commercial and residential water heaters.

Mobile source programs include Incentive Programs, an Indirect Source Program, and coordination with SANDAG on implementing Transportation Control Measures.

Incentive Programs

Mobile source incentive programs relevant to the District include the following:

- Carl Moyer Memorial Air Quality Attainment Program
- Voucher Incentive Program
- Proposition 1B Goods Movement Emission Reduction Program
- Vehicle Registration Fund Program
- American Recovery and Reinvestment Act Funding for the National Clean Diesel
- Funding Assistance Program
- Air Quality Power Generation Mitigation Fund

Indirect Source Program

The SDAPCD's Indirect Source Program consists of ongoing outreach and assistance to local governments, land developers, citizen groups, and non-profit organizations to promote emission reduction strategies. Indirect Source Program activities have included: (1) ongoing technical assistance to SANDAG on programs to encourage smart growth, (2) regional Climate Action Plan technical assistance, (3) workshop and presentation assistance to promote walkable neighborhoods, and (4) smart growth and alternative transportation fact sheets.

Transportation Control Measures

The RAQS includes the following Transportation Control Measures from SANDAG's previous Regional Transportation Plan (RTP): (1) transit improvements, (2) vanpools, (3) High-Occupancy Vehicle (HOV) lanes, (4) park-and-ride facilities, (5) bicycle facilities, and (6) traffic signal improvements. These measures reduce motor vehicle travel within the region.

SDAPCD Rules and Regulations

SDAPCD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of Federal and State air quality laws. Projects implementing the proposed PMPU may be subject to the following SDAPCD rules, and others, during construction.

- **Regulation 2, Rule 20.2—New Source Review Non-Major Stationary Sources:** establishes Air Quality Impact Analysis (AQIA) Trigger Levels, which set emission limits for non-major new or modified stationary sources.
- **Regulation 2, Rule 20.3—New Source Review Major Stationary Sources and Prevention of Significant Deterioration Stationary Sources:** establishes AQIA Trigger Levels, which set emission limits for major new or modified stationary sources or Prevention of Significant Deterioration stationary sources. Major sources are defined as those that emit 100 tons per year of PM₁₀, SO_x, CO, and lead; and 50 tons per year of NO_x and VOC in Federal ozone nonattainment areas.
- **Rule 50—Visible Emissions:** establishes limits for the opacity of emissions within the SDAPCD. The proposed PMPU is subject to Rule 50(d)(1) and (6) and should not exceed the visible emission limitation.
- **Rule 51—Nuisance:** prohibits emissions that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or cause injury or damage to business or property.
- **Rule 52—Particulate Matter:** establishes limits for the discharge of any particulate matter from nonstationary sources.
- **Rule 54—Dust and Fumes:** establishes limits for the amount of dust or fume discharged into the atmosphere in any 1 hour.
- **Rule 55—Fugitive Dust Control:** sets restrictions on visible fugitive dust from construction and demolition projects. This includes use of track-out grates or gravel beds at each egress point, wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks: using secured tarps or cargo covering, watering, or treating of transported material.
- **Rule 67—Architectural Coatings:** establishes limits to the VOC content for coatings applied within the SDAPCD.
- **Rule 67.7—Cutback and Emulsified Asphalts:** establishes general provisions and limits to the VOC content for asphalt materials applied within the SDAPCD.
- **Rule 69.2—Industrial and Commercial Boilers, Process Heaters and Steam Generators:** establishes emissions testing and standards for boilers with a heat input rating of 5 million British thermal units (BTU) per hour or more.
- **Regulation 8, Rules 1200–1210:** establishes rules and procedures governing new, relocated, or modified emission units that may increase emissions of one or more TAC. While the project is not necessarily subject to the requirements of this regulation, the risk assessment guidelines and procedures published as part of this regulation are used in the health risk assessment herein. SDAPCD is currently working on draft amendments to Rule 1210.

Community Emissions Reduction Plan

The CERP contains detailed information and strategies that are intended to reduce both air pollution emissions and community exposure to air pollution in the Community of Portside Environmental Justice Neighborhoods (Portside Community).

The goals in the CERP are aspirational and are intended to guide the community members, businesses, organizations, and government agencies partnering in the implementation of this CERP to support health and environmental justice in the Portside Community. While there might not be a clear path to reach some of these goals, the goals identify the direction in which the community wants to go to achieve emission reductions beyond regulatory requirements. As technology evolves and data continues to be collected, the goals in the CERP may be adjusted (SDAPCD 2021c).

The CERP was presented in two phases. Phase I includes actions that have been fully developed and supported by all jurisdictions or organizations that have an implementation role. The Phase I Draft CERP was released in September 2020. The Phase II CERP was finalized by SDAPCD in July 2021 and includes 11 goals and 39 actions to achieve these emission reductions. Goals include reducing TAC emissions in the community, supporting electric freight truck infrastructure and upgrades, quantifying health risk from Port and non-Port activities, establishing health risk reduction goals, and implementing actions to achieve those goals (SDAPCD 2021c). The Portside Community's CERP was approved by CARB's governing board in October 2021 (CARB 2021d).

4.2.4 Project Impact Analysis

4.2.4.1 Methodology

Air quality impacts associated with construction and operation of the proposed PMPU were assessed and quantified (where applicable) using industry standard and accepted software tools, techniques, and emission factors. A summary of the methodology is provided below. A full list of assumptions and emission calculations can be found in Appendix C. The methodology used to estimate air quality emissions discussed below is the same that was used to estimate GHG emissions, as described in Section 4.6, *Greenhouse Gas Emissions*.

Construction

Proposed land uses that could be developed under the proposed PMPU would generate construction-related criteria pollutant and TAC emissions from mobile and stationary construction equipment exhaust, employee and haul truck vehicle exhaust, dust from land clearing, other construction activities, and application of architectural coatings. However, the specific size, location, and construction techniques and scheduling that would be utilized for each individual development project occurring from implementation of the proposed PMPU is not currently known. With an anticipated buildout year of 2050, development of the various land uses associated with the proposed PMPU would occur over an extended period and would depend on factors such as local economic conditions, market demand, and other financing considerations.

Although the proposed PMPU would not directly result in construction activities, future development projects that are proposed, consistent with the proposed PMPU, would include construction activities. Therefore, construction activities are a probable indirect consequence of the proposed PMPU's implementation. In order to evaluate probable future construction activities, it is assumed that construction activities are likely to occur periodically through 2050. Moreover, construction activities could be more concentrated in certain years and timeframes.

For purposes of this analysis, total increase in waterside and landside development that could be constructed under the proposed PMPU was modeled to estimate the potential air quality impacts.

The construction analysis assumes that development under the proposed PMPU would be constructed over a 25-year period between 2025 and 2050. Total baywide waterside and landside development projections are presented in Table 4.2-11.

Landside Construction

Landside emissions were modeled in CalEEMod (Version 2020.4.0) and are based on CalEEMod default phasing schedule, equipment mix, equipment hours per day, delivery trips, worker trips, grading and paving acreage, trip lengths, and amount of surfaces painted for the sum of all development assumptions for the land use square footage in Table 4.2-11.

Emissions are based on the CalEEMod default VOC content limit of 250 grams per liter for non-residential interior and exterior coatings. The analysis includes CARB's criteria pollutant adjustment factors for gasoline light-duty vehicles to account for the SAFE Vehicle Rule (CARB 2019a). Consequently, this analysis is considered conservative, as it is likely that the Federal government and California will retain the ability to set more stringent fuel efficiency standards, as discussed in Section 4.2.3, *Laws, Regulations, Plans, and Policies*. The methods used to estimate criteria pollutant emissions by source are described below. Refer to Appendix C for more information on the modeling methods and modeling outputs.

Note that the construction analysis is based on a construction schedule that begins in 2025. In the event that construction of future PMPU-related development occurs at a date later than assumed herein, emissions are likely to be lower than the emissions presented in the analysis below due to the fact that emissions on per unit basis (e.g., per horsepower hour, per vehicle mile traveled) decrease over time, particularly due to regulations that reduce emissions and improve fuel economy over time.

Table 4.2-11. Construction Water and Land Use Assumptions

Water and Land Use	Total Growth¹
Recreational Boating (slips)	485
Commercial Fishing (slips)	65
Hotel (rooms)	3,910
Retail/Restaurant (square feet)	339,489
Convention/Meeting Space (square feet)	342,000

Source: Compiled by ICF based on Development Projections provided by the District (see Appendix C).

¹ Does not include development within PD5 and PD6.

Waterside Construction

Installation of waterside features would involve various equipment pieces, such as tugboats, pushboats, small support boats, cranes, and pumps. Waterside development projections are presented in Table 4.2-11. The types and numbers of equipment and construction schedule are based on the recent marina work, which included installation of 23 new slips over a 6- to 9-month period. Over the assumed 25-year construction period, construction of the 550 new slips (the sum of 485 recreational boating and 65 commercial fishing slips) as part of the proposed PMPU averages out to approximately 22 slips per year. Therefore, for purposes of analysis, it was assumed that one waterside project equal to the size of this representative project (23 slips) would be constructed in a given year.

Slip construction would include the use of barge-based equipment to install docks, tugs to bring barges to and from the staging area, skiffs to push docks around, and a push boat. In addition, there is a potential to use barges to store or deliver material or equipment for the landside construction.

The maximum day of slip construction assumes the crane and jet pump are active at the project site, while the skiffs arrive from the staging area and move docks around, and the push boat arrives from the staging area and maneuvers the barge. Barge placement and removal is not expected to overlap with daily marina construction activities.

Operation

Criteria pollutant and TAC emissions at the Port include tenant facilities (e.g., hotels, marinas, boatyards), maritime activity (e.g., the movement of goods and people associated with marine terminal operations), and District operations (e.g., District-owned building and outdoor energy consumption and fleet activity). Emissions sources include on-road activity related to passenger car and freight vehicle exhaust; off-road activity related to freight movement and industrial activities (e.g., boatyards, shipyards); off-road boating emissions related to recreational boating, commercial fishing, sport/charter fishing, excursions, and ferries; electricity and natural gas consumption associated with building energy and providing maritime shore power; and other utility uses, such as water consumption, and waste and wastewater generation associated with land uses (e.g., hotels).

Under the proposed PMPU, new proposed policies that affect all water and land uses baywide would be implemented through proposed elements, and allowable water and land uses would be modified. Buildout of the proposed PMPU is likely to change, and in some cases increase, activity associated with these emission sources.

Analysis Years

The proposed PMPU is designed to guide the use and development of District Tidelines through the horizon year of 2050. Development of the various water and land uses associated with the proposed PMPU would occur over an extended period and would depend on factors such as economic conditions, market demand, and other financing considerations, with an assumed buildout of all land use changes by 2050. Additionally, as discussed in detail in Section 4.6 of this PEIR, the GHG analysis considers impacts and mitigation for the year 2030, which is the next statewide GHG milestone target after the proposed PMPU's start (or certification of this PEIR). It would be speculative to attempt to approximate the exact amount of development (e.g., new hotel rooms, new commercial area developed) that would occur by 2030. However, to provide an analysis of conditions in 2030, this analysis considers activity and emission profiles (e.g., regulatory standards, discussed in more detail below) that could be in place by 2030. As mentioned, buildout of all land use changes is assumed to be 2050. As explained below, the 2030 analysis is based on the level of activity and land use change assumed to occur by 2030. In most cases, this 2030 activity estimate is based on the assumption that land uses, development, and associated activity change linearly over time between existing and buildout conditions. This is the case for all development and acreage changes. Activity assumptions for TAMT are based on the improvements and throughput assumed in the certified *Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component FEIR* (TAMT EIR, December 2016), which assumes full buildout and throughput in 2035. The proposed PMPU does not propose any changes to the cargo throughput or improvements for TAMT in comparison to what was previously approved. For purposes of this analysis, the

throughput at full buildout was conservatively assumed to occur by 2030 and to be the same as analyzed in the TAMT EIR.

A summary of new land use development assumed at full buildout of the proposed PMPU in 2050 and in 2030, relative to existing conditions, is shown in Table 4.2-12. The methods involved for each source type (e.g., motor vehicles, electricity) are described following the tables. The development assumptions for 2030 and 2050 are not additive; the total for 2030 represents the new development assumed by 2030 relative to existing conditions, while the total for 2050 represents the new development assumed by 2050 relative to existing conditions.

The proposed PMPU accounts for development at full buildout, which is assumed to be 2050. To estimate the amount of development that may occur by 2030, it was assumed that development would increase linearly through 2050. Thus, the amount of development in place by 2030 is assumed to be approximately 41 percent of full buildout—based on the number of years between the air inventory baseline year (2016) and full buildout (2050) (34 years), and the number of years between the air inventory baseline year (2016) and 2030 (14 years) (i.e., $14/34 \approx 41\%$). This scaling method applies to both boat slips and land use development (hotel rooms, retail/restaurant area, and meeting and convention center space).

Table 4.2-12. New Development Assumed for the Proposed PMPU at Full Buildout and in 2030

Planning District	2050			2030		
	Hotel Rooms	Retail/Restaurant (sf)	Convention/Meeting Space (sf)	Hotel Rooms	Retail/Restaurant (sf)	Convention/Meeting Space (sf)
PD1: Shelter Island	--	--	--	--	--	--
PD2: Harbor Island	3,060	239,500	77,000	1,255	98,195	31,570
PD3: Embarcadero	850	81,989	265,000	349	33,615	108,650
PD4: Working Waterfront	--	--	--	--	--	--
PD7: South Bay	--	--	--	--	--	--
PD8: Imperial Beach Oceanfront	--	18,000	--	--	7,380	--
PD9: Silver Strand	--	--	--	--	--	--
PD10: Coronado Bayfront	--	--	--	--	--	--
Total	3,910	339,489	342,000	1,604	139,190	140,220

sf = building square feet. Development assumptions for both years are relative to existing conditions.

Motor Vehicles

Air quality impacts from motor vehicles associated with the proposed PMPU were evaluated using the EMFAC2021 emissions model (version 1.0.1) and traffic data provided by the traffic engineers (Appendix C). The net change in daily vehicle miles traveled (VMT) and trips were provided for each planning district under full buildout conditions. The net change in daily VMT and trips for 2030 is 41 percent of the net change by 2050, based on the number of years between baseline (2016) and full buildout (34 years), and the number of years between baseline (2016) and 2030 (14 years) (i.e.,

14/34 \approx 41%). Vehicle trip information used to generate mobile source emission estimates is taken from Chen Ryan (2021) and is summarized in Table 4.2-13 (also see Appendix D). The mobile source emission factors (grams per mile and grams per trip) were estimated with EMFAC2021 based on all vehicle and fuel types at aggregated speeds for the vehicle fleet operating within San Diego County for each analysis year. Fugitive PM10 and PM2.5 dust from travel on paved roads was estimated using regionally specific emission factors from CARB's *Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust* (CARB 2021e) and added to the EMFAC2021 emission factors for PM10 and PM2.5. Criteria pollutant emissions from vehicle movement were calculated by multiplying the VMT estimates by the appropriate emission factors, and emissions from vehicle movement were added to process emissions (i.e., emission from vehicle starts, running losses, etc.), which were calculated by multiplying the daily trips by the appropriate "per trip" emission factor. The analysis also includes adjustment factors to account for the SAFE Vehicle Rule Part One and the Final SAFE Rule (CARB 2019d, 2020b), which are embedded in EMFAC2021. Inclusion of the SAFE Vehicle Rule adjustment factors is conservative in that a repeal is likely.

Table 4.2-13. Vehicle Miles Traveled Estimates with Implementation of the Proposed PMPU at Full Buildout and by 2030

Planning District	New Daily VMT	
	2050	2030
PD1: Shelter Island	1,292	530
PD2: Harbor Island	40,710	16,691
PD3: Embarcadero	16,540	6,782
PD4: Working Waterfront	0	0
PD7: South Bay	0	0
PD8: Imperial Beach Oceanfront	1,664	682
PD9: Silver Strand	492	202
PD10: Coronado Bayfront	2,004	822
Total	62,703	25,709

Source: Adapted from VMT tables in Section 4.14 of this PEIR, as well as Chen Ryan 2021 (Appendix D). Also includes VMT estimates for boating slips not included in the traffic analysis.

Land Use Development Area and Energy Sources

Operational area and energy emissions were estimated under 2030 and 2050 development conditions using CalEEMod, version 2020.4.0. The change in area source (e.g., coatings, consumer products) and energy source emissions from implementation of the proposed PMPU was quantified based on the change in land uses associated with buildout of the proposed PMPU, which is provided in Table 4.2-12. Modeling was based on CalEEMod default values and assumptions for square footage and energy consumption for each land use type (Trinity Consultants 2021).

Commercial Fishing and Recreational Boating

Emissions associated with fishing and boating activity would change over time if additional slips and berthing areas are added. A summary of each of these activity types is provided below.

- Commercial fishing includes those vessels that carry crew to fishing areas both within and outside 24 nautical miles of the Port. Commercial fishing vessels are harbored at commercial fishing areas at Shelter Island (PD1) and Tuna Harbor (in PD3).
- Recreational boating, including non-commercial boats and harbor craft, is a boating activity solely for personal enjoyment and includes a variety of gasoline- and diesel-powered vessels. San Diego Bay has numerous marinas and yacht clubs, as well as four public boat launch ramps. Recreational boating occurs at various planning districts, including PD1, PD2, PD3, PD9, and PD10.

A summary of commercial fishing emissions estimates from the 2016 maritime air emissions inventory is provided in Table 4.2-14. Note that the emissions shown are for all planning districts, even those excluded from the proposed PMPU analysis herein.

Table 4.2-14. Summary of 2016 Maritime Criteria Pollutant Emissions for Commercial Fishing (tons per year)

Sector	ROG	CO	NO _x	PM10	PM2.5	DPM	SO ₂
Commercial Fishing	2	14	18	1	1	1	<1

Source: District 2018.

Emission estimates for all baywide activities related for commercial fishing were assigned to each planning district based on the number of current slips within each planning district. Existing slip counts by slip type are as follows, including areas excluded from this PMPU analysis:

- Commercial Fishing: 228 slips, based on 123 slips within PD1 and 105 slips within PD2.

A summary of the change in fishing and boating slips associated with PMPU buildout is provided in Table 4.2-15. As shown, there would be an increase in both commercial fishing and recreational boating slips as part of the proposed PMPU. There would be no increase in sport/charter commercial fishing.

Emissions for commercial fishing were estimated based on commercial fishing sector emissions in the 2016 maritime air emissions inventory, assuming that each new boat would result in emissions that are equal to existing boats. Emissions per existing boat were estimated based on 2016 commercial fishing emissions divided by the number of fishing vessels in the 2016 emissions inventory (to create a per boat, or per slip, emission rate). Emissions associated with the new boats were estimated by multiplying the number of new boats by the emissions estimates for each existing boat for each pollutant type.

Emissions for recreational boating were estimated using CARB documentation on emission factors and annual boating activity. Activity for both analysis years (2030 and 2050) was based on the assumption that each new boating slip would be occupied by a boat that would be active 5 hours per day, based on the average of all boating activity in CARB's Pleasure Craft Model documentation (CARB 2014). Emission rates on a per-hour basis were calculated based on average annual emissions from all recreational boats operating in the San Diego region divided by the operating hours for all recreational boats in both 2030 and 2050 in the Pleasure Craft Model.

Table 4.2-15. Change in Boating Slips Assumed at Full PMPU Buildout (2050) and by 2030

Planning District	2050		2030	
	Commercial Fishing	Recreational Boating	Commercial Fishing	Recreational Boating
PD1: Shelter Island	65	35	27	14
PD2: Harbor Island	--	225	--	92
PD3: Embarcadero	--	150	--	62
PD4: Working Waterfront	--	--	--	--
PD7: South Bay	--	--	--	--
PD8: Imperial Beach Oceanfront	--	--	--	--
PD9: Silver Strand	--	20	--	8
PD10: Coronado Bayfront	--	55	--	23
Total	65	485	27	199

Tenth Avenue Marine Terminal

The TAMT EIR evaluated impacts from buildout of the TAMT Redevelopment Plan through 2035. The analysis of the proposed PMPU evaluates activities baywide through 2050. While the proposed PMPU does not propose any changes to the cargo throughput or improvements assumed in the TAMT Redevelopment Plan, and this PEIR does not re-analyze buildout of the TAMT Redevelopment Plan, it does include a discussion of the potential air quality effects between 2035 and 2050.

Correlation of Criteria Pollutants to Potential Human Health Consequences

CEQA requires an EIR to consider the potential health consequences associated with a project's long-term impacts on air quality, if feasible. An EIR should relate the expected adverse air quality impacts to likely health consequences or explain in meaningful detail why it is not feasible at the time the EIR was prepared to provide such an analysis, so that the public may make informed decisions regarding the costs and benefits of the project. The thresholds presented in Table 4.2-16 consider existing air quality concentrations and attainment or nonattainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, SDAPCD considers projects that generate criteria pollutant and O₃ precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality because the health-protective NAAQS or CAAQS would not be exceeded. Regional emissions generated by development under the proposed PMPU could increase photochemical reactions and the formation of tropospheric O₃ and secondary PM, which, at certain concentrations, could lead to increased incidence of health consequences. Although these health effects are associated with O₃ and particulate pollution, the effects are a result of cumulative and regional emissions. As such, for a project with a relatively small contribution of emissions, that project's incremental contribution cannot be traced to specific health outcomes on a regional scale, and, from a technical perspective, a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not feasible. Similarly, there are no publicly available

models that can precisely correlate localized CO, PM, and SO₂ emissions to health consequences. Refer to discussion in the section below and to Appendix C for additional information.

Regional Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by regional criteria pollutant emissions generated by development under the proposed PMPU (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (VOC and NO_x) contribute to the formation of groundborne ozone on a regional scale, where emissions of VOC and NO_x generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutant may be transported over long-distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. There are models capable of quantifying ozone and secondary PM formation and associated health effects, and these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating project-generated criteria pollutants to the locations where specific health effects could occur or estimating the resultant number of additional days of nonattainment cannot be performed with a high degree of accuracy for relatively small projects (i.e., defined as emitting 10 tons/year of NO_x or VOC by the South Coast Air Quality Management District [SCAQMD 2015]). The analysis here is conservative in that it assumes full buildout of all development associated with the proposed PMPU (all hotels, passenger vehicle, recreational boats, commercial fishing) operating on the same day.

Technical limitations of existing models to correlate project-level regional emissions to specific health consequences are recognized by air quality management districts throughout the state, including the San Joaquin Valley Air Pollution Control District (SJVAPCD) and SCAQMD. SJVAPCD (2015) acknowledges that while health risk assessments for localized air toxics, such as DPM, are commonly prepared, “it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.” SCAQMD reaches a similar conclusion, stating that “it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels”⁶ (SCAQMD 2015).

4.2.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of impacts associated with air quality resulting from the proposed PMPU. The determination of whether an air quality impact would be significant is

⁶ For example, SCAQMD’s analysis of their 2012 Air Quality Attainment Plan showed that modeled NO_x and VOC reductions of 432 and 187 tons per day, respectively, only reduced ozone levels by 9 ppb. Analysis of SCAQMD’s Rule 1315 showed that emissions of NO_x and VOC of 6,620 and 89,180 pounds per day, respectively, contributed to 20 premature deaths per year and 89,947 school absences (SCAQMD 2015).

based on the thresholds described below and the professional judgment of the District as Lead Agency based on the evidence in the administrative record.

Impacts are considered significant if the proposed project would result in any of the following.

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the PMPU region is nonattainment under an applicable Federal or State ambient air quality standard.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Supplemental Thresholds

The following section summarizes the significance thresholds established by the County of San Diego; presents substantial evidence regarding the basis upon which they were developed; and describes how they are used to determine whether project construction and operational emissions would result in a significant impact within the context of (1) interfering with or impeding attainment of CAAQS and NAAQS or (2) causing or contributing to increased risks to human health.

Consistency with the Applicable Air Quality Plan

SDAPCD is required, pursuant to the NAAQS and CAAQS, to reduce emissions of criteria pollutants for which the county and air basin are in nonattainment. The most recent air quality attainment plans are the 2020 O₃ attainment plan, adopted in 2020 and designed to attain the NAAQS for O₃, and the 2016 RAQS, adopted in 2016 and designed to attain the CAAQS for O₃. The RAQS and SIP project future emissions and determine the strategies necessary for the reduction of stationary source emissions through regulatory controls. The RAQS and SIP rely on the cumulative emission projections and control measures outlined in the SIP. CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the region's cities and by the County of San Diego.

Project or plan consistency with the RAQS and SIP can be determined by considering if the future development that would occur with the proposed PMPU's implementation would be consistent with the growth anticipated by SANDAG's growth projections, which were used in the formulation of the RAQS and SIP. If the growth was included, then the proposed PMPU would be consistent with the RAQS and SIP. If the growth was not included in SANDAG's growth projections (i.e., greater than anticipated in the projections), the PMPU would not be considered consistent with the RAQS and SIP and would potentially result in a significant impact on air quality.

Moreover, if the proposed PMPU is consistent with the overarching goals (i.e., to reduce emissions and attain NAAQS and CAAQS) and strategies (i.e., measures implemented to reduce emissions), then it would be consistent with the RAQS and SIP.

Regional Pollutant Thresholds and Health Risks

Regional Thresholds for SDAB Attainment of State and Federal Ambient Air Quality Standards

As previously indicated, the CEQA Guidelines state that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the significance determination of whether a project would violate or impede attainment of air quality standards. Attainment status for each pollutant is assigned for the entire air basin. In San Diego, the SDAB is defined as “all of San Diego County” (see 17 CCR 60110). Therefore, the current attainment status for the entire San Diego region, which includes nonattainment status for ozone NAAQS and ozone CAAQS, PM10 CAAQS, and PM2.5 CAAQS, applies to the entire county.

The District does not currently have specific CEQA thresholds of significance for air quality and health risk.⁷ Although SDAPCD has not developed specific thresholds of significance to evaluate construction and operational impacts within CEQA documents, SDAPCD’s Regulation II, Rules 20.2 and 20.3 (new source review for non-major and major stationary sources, respectively), outline AQIA Trigger Levels for criteria pollutants for new or modified sources. Based on SDAPCD’s AQIA Trigger Levels, as well as EPA rulemaking and CEQA thresholds adopted by the SCAQMD, the County of San Diego has established screening-level thresholds (SLTs) to assist lead agencies in determining the significance of project-level air quality impacts within the county. Although SDAPCD does not have VOC or PM2.5 AQIA Trigger Levels, the County has adopted a PM2.5 SLT based on EPA’s “Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards” published on September 8, 2005, which is also consistent with SCAQMD’s Air Quality Significance Thresholds (SCAQMD 2019), and a VOC SLT based on the threshold of significance for VOCs from the SCAQMD for the Coachella Valley (SCAQMD 1993). Emissions in excess of thresholds shown in Table 4.2-16 would be expected to have a significant impact on air quality because an exceedance of the thresholds is anticipated to contribute to CAAQS and NAAQS violations in the county under existing and cumulative conditions.

The County’s SLTs are based on SDAPCD AQIA Trigger Levels, and these AQIA Trigger Levels are based on emissions levels identified under the New Source Review (NSR) program, which is a permitting program established by Congress as part of the CAA Amendments of 1990 to ensure that air quality is not significantly degraded by new or modified sources of emissions. The NSR program requires that stationary sources receive permits before construction begins and/or the use of equipment. By permitting large stationary sources, the NSR program ensures that new emissions would not slow regional progress toward attaining the NAAQS. SDAPCD implements the NSR program through Rules 20.2 and 20.3, and has concluded that the stationary pollutants described under the NSR program are equally significant as those pollutants generated with land use projects. SDAPCD’s Trigger Levels were set as the total emission thresholds associated with the NSR program to help attain and maintain the NAAQS from new and modified non-major stationary sources.⁸ SDAPCD’s Trigger Levels take into account the region’s attainment status, emission profile, inventory, and projections, and represent levels above which project-generated emissions could affect SDAPCD’s and SANDAG’s commitment to attain the State and Federal standards in the region.

⁷ The District is currently in the process of drafting CEQA thresholds of significance for all resources, including air quality. Until these thresholds are adopted, the District may continue to rely on established regional thresholds, which are based on substantial evidence summarized herein.

⁸ San Diego Air Pollution Control District, Rule 20.2, Table 20.2-1, hereby incorporated by reference: https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/Rules_and_Regulations/Permits/APCD_R20-2.pdf.

Consistent with Section 15064.7(c) of the State CEQA Guidelines,⁹ the evidence in support of the air quality thresholds shown in Table 4.2-16 is deemed appropriate for their use in this analysis and in this location within the greater SDAB.

Project emissions below the NAAQS or CAAQS would not have significant health impacts because the standards are set to be protective of human health. Conversely, project emissions above the standards would potentially have significant health impacts because the NAAQS and CAAQS are set to be protective of human health and are designed to prevent impacts on health and the environment. An air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment (CARB 2021a). At the Federal level, Section 109(b) of the CAA directs EPA to establish standards to be protective of public health with an adequate margin of safety. To derive these standards, EPA reviews data from integrated science assessments and risk/exposure assessments to determine the ambient pollutant concentrations at which human health impacts occur, then reduces these concentrations to establish a margin of safety (EPA 2018).

Table 4.2-16. Air Quality Thresholds

Air Contaminant	Emission Rate		
	(pounds per hour)	(pounds per day) ¹	(tons per year)
Respirable Particulate Matter (PM10)	--	100	15
Fine Particulate Matter (PM2.5) ²	--	55	10
Nitrogen Oxides (NO _x)	25	250	40
Sulfur Oxides (SO _x)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead (Pb) ³	--	3.2	0.6
Volatile Organic Compounds (VOC) ⁴	--	75	13.7 ⁵

Source: SDAPCD Regulation II, Rule 20.2, County of San Diego 2007.

¹ According to the County of San Diego, the daily thresholds are most appropriate when assessing impacts from standard construction and operational emissions. Therefore, daily thresholds are used to evaluate project significance, while hourly and annual thresholds are provided for informational purposes only.

² Based on EPA's "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005, and also SCAQMD's Air Quality Significance Thresholds (SCAQMD 2015). Rule 20.2 was amended in 2018 to include PM2.5 AQIA of 67 pounds per day. However, as 55 pounds per day is lower (and more restrictive), 55 pounds per day, as recommended by the County and used elsewhere throughout the region, is used here.

³ Lead and lead compounds.

⁴ County SLTs for VOCs were originally based on the threshold of significance for VOCs from SCAQMD for the Coachella Valley. The terms VOC and ROG are used interchangeably, although VOC is used in this document because the County uses the term VOC.

⁵ 13.7 tons per year threshold is based on 75 pounds per day multiplied by 365 days per year and divided by 2,000 pounds per ton.

Health-Based Thresholds for Project-Generated Pollutants of Human Health Concern

The thresholds presented in Table 4.2-16 consider existing air quality concentrations and attainment or nonattainment designations under the health-based NAAQS and CAAQS. While

⁹ "When adopting (or using) thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

recognizing that air quality is cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by development under the proposed PMPU could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which at certain concentrations could lead to increased incidence of specific health consequences. Although these health effects are associated with ozone and particulate pollution, the effects are a result of cumulative and regional emissions. As such, a project's incremental contribution cannot be traced to specific health outcomes on a regional scale, and a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is therefore not included in this analysis. It is foreseeable that unmitigated construction- and operational-generated emissions of ozone precursors and PM in excess of SDAPCD thresholds could contribute to cumulative and regional health impacts of exposure to ozone and PM discussed in Section 4.2.2.3, *Pollutants of Concern*. In such cases, all feasible mitigation is applied.

Localized Project-Generated Criteria Pollutants (CO) and Air Toxics (DPM) Thresholds and Health risks

Localized pollutants generated by a project are deposited and potentially affect population near the emissions source. Because these pollutants dissipate with distance, emissions from individual projects can result in direct and material health impacts on adjacent or nearby sensitive receptors. Models and thresholds are readily available to quantify these potential health effects associated with CO and DPM and evaluate their significance (CAPCOA 2009, OEHHA 2015, CARB 2000). Locally adopted thresholds and analysis procedures for the localized pollutants of concern associated with the proposed PMPU (CO, DPM, and naturally occurring asbestos) are identified below.

Localized Carbon Monoxide Concentrations

The significance of localized impacts under CEQA depends on whether ambient CO levels in the vicinity of a project are above or below CAAQS and NAAQS. The applicable CAAQS and NAAQS for CO are as follows:

- CAAQS and NAAQS 1-hour CO standards of 20 and 35 ppm, respectively.
- CAAQS and NAAQS 8-hour CO standards of 9.0 and 9 ppm, respectively.

Ambient CO levels in the entire San Diego region are below the NAAQS and CAAQS, and the region is in attainment. Projects that do not generate CO concentrations in excess of the health-based NAAQS and CAAQS would not contribute a significant level of CO such that localized air quality and human health would be substantially degraded.

Localized Diesel Particulate Matter Concentrations

DPM is a form of localized PM (see above for a detailed discussion) that is generated by diesel equipment and vehicle exhaust. DPM has been identified as a TAC by CARB and is particularly concerning because long-term exposure can lead to cancer, birth defects, and damage to the brain and nervous system. The County of San Diego has adopted incremental cancer and hazard thresholds to evaluate receptor exposure to DPM emissions, which are adapted from SDAPCD Regulation XII, Rule 1200 (SDAPCD n.d.). Projects that would result in exposure to TACs resulting in a maximum incremental cancer risk (MICR) greater than 1 in 1 million without application of Toxics

BACTs, MICR greater than 10 in 1 million with application of Toxics BACTs, or a chronic and acute non-cancer health hazard index greater than 1.0 would be deemed as having a significant impact related to health risks from DPM exposure. Because various Toxics BACTs are in place at the Port—including CARB rules on vessels, shore power, and drayage trucks—the MICR of 10 in 1 million is utilized herein.

Asbestos-Containing Materials

There are no quantitative thresholds related to receptor exposure to asbestos. However, SDAPCD Rule 40 requires the demolition or renovation of asbestos-containing building materials to comply with the limitations of NESHAP regulations as listed in the Code of Federal Regulations (SDAPCD 2020b). See Section 4.7, *Hazards and Hazardous Materials*, for an analysis of impacts related to asbestos.

4.2.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policies would have the potential to avoid or reduce impacts associated with air quality and health risk and are considered in the impact analysis that follows.

ECO Policy 3.1.1 Permittees shall implement programs and activities that reduce exposure to toxic air contaminants and criteria air pollutants in and adjacent to Tidelands.

ECO Policy 3.1.2 Permittees shall implement clean air action measures, which may include:

- a. Efficient buildings design features;
- b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered;
- c. Parking management programs;
- d. Alternative transportation programs;
- e. Energy efficient lighting; and
- f. Native tree planting and landscaping.

ECO Policy 3.1.3 In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality.

ECO Policy 3.1.4 Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable.

ECO Policy 3.1.5 The District shall explore financing programs in coordination with regional, State, and Federal partners to implement recommended clean air measures.

SR Policy 3.1.1 The District shall periodically update the District's CAP to ensure alignment with this Plan and with the District and State goals and targets for greenhouse gas emissions and shall start the CAP's update no later than two years of the effectiveness of the certification of this Plan, and may periodically update the District's CAP thereafter.

SR Policy 3.1.2 The District shall encourage, support, and plan to deploy net zero carbon emission projects and technologies on Tidelands.

SR Policy 3.1.3 Permittees of development shall deploy renewable energy technology to improve energy reliability and economic resilience, where feasible.

SR Policy 3.1.4 The District shall explore innovative carbon sequestration potential with partner agencies within the region to offset GHG emissions.

SR Policy 3.1.5 The District shall continue to coordinate with Tidelands' tenants and adjacent local businesses to reduce resource consumption and promote sustainable operations.

SR Policy 3.1.6 The District shall promote the innovative use of "green" design for new or retrofitted Tidelands' buildings, structures, and facilities.

EJ Policy 3.1.1 The District shall work to reduce the cumulative health burdens on neighboring communities, especially disadvantaged communities, in developing, adopting, implementing, and enforcing environmental laws, regulations, and policies.

EJ Policy 3.1.2 The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in Portside Communities.

EJ Policy 3.2.1 The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities.

EJ Policy 3.2.2 Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science.

EJ Policy 3.2.3 Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals.

EJ Policy 3.2.4 Support actions and measures taken by tenants and occupants on Tidelands that improve environmental conditions and advance long term sustainability.

ECON Policy 2.3.2 The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions.

Mobility Policy 1.1.8 The District shall coordinate with agencies that have transportation authority, and with adjacent jurisdictions and permittees, to plan shared mobility infrastructure in support of the safe movement of people and/or goods. Specific transit improvements included in this Plan are outlined in Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict.

Mobility Policy 1.1.9 The District shall coordinate with agencies that have transportation authority to explore opportunities to expand accessible transit service to Tidelands. Specific transit

improvements included in this Plan are outlined in Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict.

Mobility Policy 1.1.10 The District shall provide areas for transit stops and transit lanes for expanded transit opportunities on Tidelands and explore a means for financing expanded transit opportunities with agencies that have transportation authority. Specific transit improvements included in this Plan are outlined in Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict.

Mobility Policy 1.1.11 The District shall develop Transportation Demand Management (TDM) guidelines and require development to comply with such guidelines, with the intent to reduce dependence on single-occupancy vehicles and reduce vehicle miles traveled to, from, and within Tidelands. All proposed development shall also be required to provide a project-specific TDM program in accordance with the District's guidelines.

Mobility Policy 1.1.13 Shared or personal motorized mobility devices, except for those required for Americans with Disabilities Act purposes, shall not be permitted on facilities on which pedestrians are intended to travel, such as sidewalks, promenades, multi-use pathways (without a dedicated bicycle area), nature trails, and walkways.

Mobility Policy 1.1.14 The District shall coordinate with agencies that have transportation authority to enhance coastal connectivity and access throughout Tidelands, particularly at mobility hub locations.

Mobility Policy 1.1.16 Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission mobility options, when feasible, and near-zero-emission mobility options and supportive infrastructure improvements for the movement of people in alignment with District sustainability and maritime clean air strategies.

Mobility Policy 1.1.17 The District may expand the summer shuttle service (Big Bay Shuttle) that operates along Harbor Drive, establishing year-round connections between Shelter Island and the Convention Center, as a mobility priority (refer to Figure 3.2.4, Bayfront Circulator).

Mobility Policy 1.1.18 Development, adjacent to the bayfront circulator route as shown in Figure 3.2.4, Bayfront Circulator, shall provide hubs or stops to support operation of the bayfront circulator.

Mobility Policy 1.1.19 The District shall prepare a curbside management program that will provide strategies and guidelines for the use of curb space along corridors fronted by predominantly commercial uses.

Mobility Policy 1.1.20 Development shall implement curbside management strategies in accordance with the District's curbside management program, once established.

Mobility Policy 1.1.21 The District—independently or in collaboration with other agencies with transportation authority and adjacent jurisdictions and permittees—may identify additional waterside or landside access opportunities in the future to enhance the mobility network for the movement of people.

Mobility Objective 1.2 Implement a series of interconnecting mobility hubs throughout Tidelands.

Mobility Policy 1.2.1 The District shall require the planning, designing, and implementation of a network of mobility hubs (Regional, Local Gateway, and Connector) that provide the opportunity for users to change from one mode of travel to another (refer to Chapter 5, Planning Districts, Coastal Access Mobility maps, for mobility hub locations and specifications and Chapter 4, Baywide development standards, for the associated criteria of the development for each type of mobility hub). This requirement shall apply to all subdistricts and commensurate with development intensity in accordance with WLU Goal 7 (Chapter 3.1, Water and Land Use Element) and Mobility Policy 1.2.2).

Mobility Policy 1.2.2 Permittees of development shall contribute to the creation of mobility hubs through funding or construction, as shown in Chapter 5, Planning Districts, coastal access mobility maps.

Mobility Policy 1.2.3 Mobility hubs shall connect to water-based access points throughout the Bay, where feasible.

Mobility Policy 1.2.4 The District shall encourage the development of mobility hubs rather than surface parking to provide proximate connections to the water and Tidelands, where feasible.

Mobility Policy 1.2.5 The District shall coordinate with adjacent jurisdictions to add wayfinding signage that identifies coastal access opportunities on Tidelands, including public walkways, docks and piers, beaches, and other public areas and amenities.

Mobility Policy 1.2.6 Development shall provide and maintain legible wayfinding signage located in easily viewable areas in accordance with Chapter 4, Baywide Development Standards, and Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

Mobility Policy 1.2.7 The District shall require, in coordination with permittees of development, the planning, designing, and implementation of a comprehensive, nondigital wayfinding signage system to guide visitors to and throughout Tidelands.

Mobility Policy 2.1.2 The District shall encourage the development of versatile infrastructure that can adapt to future needs and support multiple modes of travel for the transfer of freight between waterside and landside uses.

Mobility Policy 2.1.4 The District shall require, where feasible, efficient and sustainable dockside operations for oceangoing vessels and freight-related harbor craft.

Mobility Policy 2.1.5 The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside.

Mobility Policy 2.1.6 The District shall collaborate with public and private entities to invest in terminal infrastructure that supports the optimization of cargo movement, cargo laydown areas, cargo handling equipment, and gate operations directly related to maritime cargo.

Mobility Policy 2.2.1 Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, *Planning Districts*, including any development standards within the applicable planning district or subdistrict.

Mobility Policy 2.2.2 Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies.

Mobility Policy 2.2.3 The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives.

Mobility Policy 2.2.4 The District shall engage with railroad operators and agencies that have transportation authority to maintain, enhance, and expand access between the cargo terminals and the regional freight infrastructure.

Mobility Policy 2.2.5 The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, and regional transportation agencies, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, and pipelines, to enable efficient movement of goods along those networks and to support the working waterfront.

Mobility Policy 2.2.6 The District and permittees shall optimize off-terminal land-based freight networks to maintain, enhance, and expand the vitality of the working waterfront.

Mobility Policy 2.2.7 In coordination with operators and stakeholders, the District shall plan for improvements to railroad corridors, such as spurs, rail storage facilities, switching facilities, and suitable rail trackage within the working waterfront, both on dock and near dock, to better interface the movement of cargo between ship and land carriers.

Mobility Policy 2.2.8 Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies.

Mobility Policy 2.2.9 The District shall coordinate with its tenants and the cities of National City or San Diego to enhance access and connectivity between the Tenth Avenue and National City marine terminals, on both the waterside and landside, to allow for the convenient transfer of goods. Specific improvements to enhance the connectivity between terminals are outlined in Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict.

Mobility Policy 3.1.1 The District shall engage with the U.S. military, local, regional, and State agencies with transportation authority to:

- a. Identify and document the transportation facilities located on Tidelands that either are part of the STRAHNET or provide a critical connection to strategic facilities located on or adjacent to Tidelands;
- b. Ensure that the critical components of the District's transportation network are available and maintained to meet the goals and standards of the STRAHNET; and
- c. Ensure that the identified critical transportation facilities located on Tidelands are clear of permanent obstructions that would prohibit or slow the movement of military use when needed for Department of Defense activities.

Mobility Policy 3.1.2 The District shall engage with the U.S. military, local, regional, and State agencies with transportation authority to coordinate the maintenance of facilities that connect to the region's STRACNET rail corridor.

Mobility Policy 3.2.1 The District shall engage with the U.S. military to identify and ensure the effectiveness of critical assets for military use, such as marine terminals, rail facilities, and docks and piers, that may be needed in times of emergency while allowing day-to-day access to strategic assets.

Mobility Policy 3.2.2 The District shall plan and maintain its transportation network so that it has the capacity to evacuate operations located on terminals in a manner and timeframe consistent with the U.S. military's needs.

4.2.4.4 Project Impacts and Mitigation Measures

Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan?

Impact Analysis

Impacts of Water and Land Uses

Implementation of the proposed PMPU could conflict with applicable air quality plans if it is inconsistent with the growth projections assumed or if it would conflict with the overarching goals and strategies in the RAQS and SIP.

Growth Consistency Assessment

There are a variety of land uses within the proposed PMPU area, including both water- and land-dependent uses that span several jurisdictions. Table 4.2-12 summarizes the new development assumed within each planning district. As shown, implementation of the proposed PMPU would result in increases in hotel rooms, retail and restaurant uses, as well as convention center and meeting space. Table 4.2-15 summarizes the waterside development assumptions (new boating and fishing slips) within each planning district. As shown in Table 4.2-15, implementation of the proposed PMPU would result in increased opportunities for recreational boating and commercial fishing due to increased available recreational boating and commercial fishing slips. As discussed above in Section 4.2.4.1, *Methodology*, increases in future development allowed under the PMPU would result in related changes in vehicle use (average daily trips and VMT) and recreational boating and fishing activity.

Progress toward attainment of the NAAQS and CAAQS is based on emissions budgets identified in the RAQS and SIP. An emissions budget identifies the emissions level necessary for meeting emission reduction milestones, attainment, or maintenance demonstrations. This budget considers existing conditions, planned growth based on SANDAG's growth projections (which include District growth), and air quality control measures implemented by SDAPCD. The RAQS and SIP utilize SANDAG growth forecasts and CARB mobile source forecasts to develop emissions reduction measures necessary for attaining the NAAQS and CAAQS. The SANDAG model used for projecting population, housing, and job growth in the county considers the demographic, economic, and land use data from all relevant planning documents, including the existing PMP. Accordingly, because the

proposed PMPU plans for development beyond that which is contemplated in the PMP, SANDAG's growth forecasts do not account for the proposed changes in water and land use contemplated as part of the proposed PMPU. It is worth noting that SANDAG notes in its growth forecast that growth between 2030 and 2050 includes alternatives that may, in some cases, reach beyond existing adopted plans (SANDAG 2013). However, it is unclear what SANDAG assumed beyond 2030 for the District. As such, because the RAQS and SIP are based on SANDAG's growth projections, and these growth projections are based on the existing PMP, the proposed PMPU would be inconsistent with the RAQS and applicable portions of the SIP (**Impact AQ-1**). Mitigation measure **MM-AQ-1** is required to ensure that projected PMPU growth is used to update SANDAG's growth projections, thus informing the air quality strategies contained within the RAQS and SIP with the new development assumptions.

Consistency with Goals and Strategies

As discussed above, if the proposed PMPU is consistent with the overarching goals (i.e., to reduce emissions and attain NAAQS and CAAQS) and strategies (i.e., measures implemented to reduce emissions) of applicable air quality plans, then it would be consistent with applicable air quality plans. The 2016 RAQS and both the 2020 and 2016 SIPs contain numerous goals and strategies to reduce emissions, primarily VOC and NO_x emissions, within the county. The strategies and measures in these plans that are relevant to the proposed PMPU address emissions sources such as solid waste, on-road vehicles, general industrial, marine industrial, coatings, and manufacturing. As the authority on local air quality, the SDAPCD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of Federal and State air quality laws within the SDAB. As such, the proposed PMPU would be subject to, and consistent with, the relevant SDAPCD rules during future construction and operation within the proposed PMPU area. In addition, several incentive programs are presented in the SDAPCD plans as means to achieving attainment within the SDAB. These programs include State- and Federally funded grant programs that target emissions from on-road, medium- and heavy-duty diesel engines, general goods movement, marine, and off-road equipment sources.

SDAPCD has implemented 13 Transportation Control Measures (TCMs) (SDAPCD 2020). These include transit and traffic flow improvements, ridesharing, HOV lanes, pedestrian-only streets, and limits on extended vehicle idling. SANDAG and other State and local transportation agencies implement these TCMs. The proposed PMPU does not include any elements that would conflict with or impede successful implementation of these TCMs. These TCMs are focused on reducing passenger car vehicle trips and congestion relief. Rather, the proposed PMPU would be consistent with these TCMs by promoting coordination with transportation agencies to plan, operate, maintain, and improve the regional mobility infrastructure for the movement of people and goods (Mobility Policy 1.1.8), expanding accessible transit service to Tidelands (Mobility Policy 1.1.9), and exploring financing options for transit expansion (Mobility Policy 1.1.10). The proposed PMPU also discusses specific transit improvements in Chapter 5, *Planning Districts*, including any planned improvements within the applicable planning district or subdistrict. These include, but are not limited to, a mobility hub in the North Embarcadero Subdistrict of PD3 and a dedicated transit lane for the bayfront circulator route along Harbor Drive in the South Embarcadero Subdistrict of PD3. In addition, the District would develop TDM guidelines and require development to comply with such guidelines, with the intent to reduce dependence on single-occupancy vehicles and reduce VMT to, from, and within Tidelands (Mobility Policy 1.1.11). Thus, the proposed PMPU is consistent with the goals and strategies in the RAQS and SIP.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, *Project Description*, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to conflicts with applicable air quality plans (**Impact-AQ-1**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above, with minor differences associated with the Waterfront Destination Park, some increase in Recreation Open Space and Commercial Recreation uses, and a decrease in roadway acreage from the closure of the portion of North Harbor Drive. However, these differences would not result in growth or activities that differ from those analyzed above for the proposed PMPU. In fact, closure of this portion of North Harbor Drive would promote goals and strategies being implemented by SDAPCD to reduce emissions from motor vehicles, as it would promote pedestrian walking, bicycling, and pedicab circulation. Even though these differences would not result in growth or activities that differ from those analyzed above for the proposed PMPU, the growth associated with Option 1 would have the potential to conflict with air quality plans, as it was not accounted for in the RAQS and SIP, which would be considered a significant impact (**Impact-AQ-1**).

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to conflicts with applicable air quality plans (**Impact-AQ-1**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above, with minor differences associated from the additional Recreation Open Space along with the expansion of the Lane Field Setback Park. However, these differences would not result in growth or activities that differ from those analyzed above for the proposed PMPU. Still, growth associated with Option 2 would have the potential to conflict with air quality plans, as it was not accounted for in the RAQS and SIP, which would be considered a significant impact (**Impact-AQ-1**).

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to conflicts with applicable air quality plans (**Impact-AQ-1**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above, with minor differences associated with realignment of North Harbor Drive and an increase in Recreation Open Space. However, these differences would not result in growth or activities that differ from those analyzed above for the proposed PMPU. Still, growth associated with Option 3 would have the potential to conflict with air quality plans, as it was not accounted for in the RAQS and SIP, which would be considered a significant impact (**Impact-AQ-1**).

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to conflicting with or obstructing implementation of an applicable air quality plan. Rather, the proposed PMPU policies listed in Section 4.2.4.3, *Policies that May Avoid or Reduce Impacts*, would reduce potential impacts related to compliance with applicable air quality plans by implementing programs and activities that reduce exposure to toxic air contaminants and criteria air pollutants (ECO Policy 3.1.1); implementing clean air action measures to reduce emissions, such as efficient buildings design features and promoting the use of alternative fuels or electric powered vehicles and vessels (ECO Policy 3.1.2); cooperating with regional, State, and Federal agencies to advance maritime clean air strategies to help improve local air quality (ECO Policy 3.1.3); implementing infrastructure and clean vessel technologies, for both while in transit and at berth (ECO Policy 3.1.4); and exploring financing programs in coordination with regional, State, and Federal partners to implement recommended clean air measures (ECO Policy 3.1.5). Moreover, various Mobility policies would expand and support transit improvements (Mobility Policy 1.1.8, Mobility Policy 1.1.9, and Mobility Policy 1.1.10), while Mobility Policy 1.1.11 states that the District shall develop TDM guidelines and require development to comply with such guidelines, which is consistent with trip-reductions measures in the RAQS and SIP. These policies would help reduce the cumulative basin-wide burden of emissions and help ensure consistency with the goals and strategies in the RAQS and SIP.

Impact Determination and Mitigation

Implementation of the proposed PMPU would conflict with or obstruct implementation of an applicable air quality plan.

Significant Impacts

Impact-AQ-1: New Land Use Designations Not Accounted for in the RAQS and SIP. The proposed PMPU would redesignate various water and land uses that could increase activity within the Tidelands. As these land use changes were not known at the time the RAQS and SIP were last updated, this would result in a conflict with the applicable State and regional air quality plans because the proposed land uses and the intensities proposed are not included in RAQS and SIP growth projections.

Mitigation Measures

For **Impact-AQ-1**:

MM-AQ-1: Update the RAQS and SIP with New Growth Projections. Within 6 months of approval of the proposed PMPU, the District shall provide SANDAG with amended growth

assumptions and changes to water and land use designations associated with the proposed PMPU. The District shall coordinate with SANDAG and the SDAPCD to ensure the RAQS and SIP are updated as part of the next soonest revision cycle to reflect the updated growth assumptions of the proposed PMPU.

Level of Significance After Mitigation

Implementation of the proposed PMPU would change designations and increase development within the proposed PMPU area relative to the existing PMP. The proposed changes would have the potential to be inconsistent with the growth anticipated by the current PMP that was used in the formulation of the RAQS and SIP, resulting in a significant direct impact related to conflicting with air quality plans. Implementation of **MM-AQ-1** will ensure the proposed PMPU is consistent with the RAQS and SIP, and the proposed PMPU would no longer be inconsistent. Because this presumes that SANDAG and SDAPCD will perform their official duties to update the RAQS and SIP, implementation of the proposed PMPU policies and standards and **MM-AQ-1** would reduce **Impact-AQ-1** to a level below significance. Therefore, **Impact-AQ-1** would be less than significant after mitigation.

Threshold 2: Result in a cumulatively considerable net increase of any criteria pollutant for which the PMPU region is nonattainment under an applicable Federal or State ambient air quality standard?

Impact Analysis

Impacts of Water and Land Uses

As a result of past and present projects, the SDAB is currently in nonattainment for O₃ under the NAAQS, and for O₃, PM₁₀, and PM_{2.5} under the CAAQS (see Section 4.2.5, *Cumulative Impact Analysis*). Implementation of the proposed PMPU could result in construction and operational activities that may result in air quality emissions, including O₃ precursors (VOC and NO_x), PM₁₀, and PM_{2.5}. The construction- and operations-related air quality impacts are discussed below.

Construction

The proposed PMPU serves as a long-term planning blueprint for future development within eight of the District's ten planning districts. Approval of the plan would not include approval of any specific development project, including, without limitation, the construction of any buildings, infrastructure, or boat slips. However, future construction activities would result from future development projects that meet the water and land use designation requirements and abide by the policies and standards set forth by the proposed PMPU. Specifically, buildout of the proposed PMPU would potentially include the construction of new hotels and lower cost accommodations; restaurants and entertainment venues; park space and promenades; retail, convention, and meeting space; office space; and other uses. In-water development could include additional vessel activity associated with more slips and docks with waterside uses that include anchorage, commercial fishing berthing, industrial and deep-water berthing, marine services berthing, navigation corridors, recreational berthing, and sportfishing berthing facilities.

Although implementation of the proposed project would increase the construction activity in the proposed PMPU planning area, the buildout of the proposed PMPU would take place over a long-range timeframe, and construction activities would occur periodically throughout that timeframe.

Construction of landside uses would result in emissions from construction equipment exhaust, haul and delivery trucks, and worker vehicles; fugitive dust from demolition, site grading, and general surface disturbance; and fugitive ROG from architectural coatings and paving. Construction of waterside uses to construct additional slips, docks, and moorings would include use of in-water equipment such as tugboats, survey vessels, skiffs, and other types equipment to remove, move, and install waterside features. Construction emissions for individual projects would be temporary, and the total duration would vary from project to project. Construction emissions can vary substantially from day to day depending on the level of activity, the specific type of operation, and, for dust, prevailing weather conditions.

Table 4.2-17 presents the estimated construction emissions from implementation of the proposed PMPU assuming all development is averaged over the life of the proposed PMPU (i.e., through 2050). The construction emissions estimates compare maximum daily emissions, assuming overlapping waterside and landside activities, to relevant thresholds for ROG, NO_x, CO, SO_x, PM10, and PM2.5. DPM emissions, a subset of PM10 and PM2.5, are presented for informational purposes as there is no mass emissions threshold for DPM emissions. The estimates in Table 4.2-17 are representative of worst-case conditions that could occur during overlapping construction activities. Overlapping construction activities on the worst-case day would not occur every day over the life of the proposed PMPU. Instead, construction emissions would occur intermittently, and average daily emissions would be less than shown here.

Table 4.2-17. Construction Emission Estimates Associated with All Development Through 2050—Unmitigated (pounds per day)

Phase	ROG	NO _x	CO	SO _x	PM10	PM2.5	DPM
Demolition	4	59	29	<1	35	7	2
Site Preparation	3	33	20	<1	21	12	2
Grading	3	35	29	<1	11	5	1
Building Construction	10	63	87	1	29	9	1
Paving	1	5	16	<1	<1	<1	<1
Architectural Coating	653	1	9	<1	4	1	<1
Waterside Construction	17	112	248	<1	6	5	6
Maximum Daily	692	308	437	1	107	39	11
<i>Thresholds</i>	75	250	550	250	100	55	--
Exceed?	Yes	Yes	No	No	Yes	No	--

Source: Appendix C.

Note: Emissions may not sum exactly due to rounding. Assumes CalEEMod default for all development and that all waterside and landside phases would occur concurrently.

As shown in Table 4.2-17, construction of the proposed PMPU could result an exceedance of thresholds for ROG, NO_x, and PM10. The majority of ROG during construction would be due to architectural coatings. The majority of NO_x emissions would be due to equipment associated with waterside construction, which is assumed to involve numerous in-water and landside construction pieces, such as tugboats, pushboats, small support boats, and cranes, as well as the numerous worker and delivery trips associated with the building construction phase. Each marina expansion project is assumed to take an average of 3 months, and it is assumed that only one such project could occur at a time based on historical data of past marina expansion projects. The majority of

PM10 emissions would be due to dust generated during demolition, site preparation, and grading activities, as well as paved road dust from material hauling and deliveries. Additionally, the CalEEMod default assumptions for worker and delivery trips are based on the square footage of building construction per day. Also, note that construction emissions would primarily occur in PD2 and PD3, as they would likely experience see the most development as part of the proposed PMPU.

The quantitative modeling in Table 4.2-18 above estimates construction emissions associated with full buildout of future development allowed under the PMPU. However, the proposed PMPU is a long-range plan and does not include a specific buildout schedule. Thus, the exact types and sizes of future development would be driven by market conditions, and construction of future land use developments would occur intermittently throughout the course of the buildout period. Although the timing and intensity of future development projects are not known at this time, implementation of the proposed PMPU would result in construction of multiple and concurrent projects that could generate criteria pollutant emissions on a daily basis that exceed thresholds and are considered significant as shown in Table 4.2-17.

Therefore, potential construction impacts are considered significant, and mitigation is required (**Impact AQ-2**).

Mitigation measures **MM-AQ-2** through **MM-AQ-9** will mitigate construction impacts associated with buildout of the proposed PMPU. The construction mitigation measures and their effects of on emissions are summarized below.

- **MM-AQ-2** requires construction best practices, including maintaining construction equipment in proper working condition, minimizing idling time, and promoting measures to reduce construction worker commute trips. These measures would reduce all emission types, and, although emission reductions cannot be quantified, they are likely to be small in scale.
- **MM-AQ-3** requires all off-road equipment to use renewable diesel and meet Tier 4 emissions standards, depending on when construction occurs. These measures would reduce all emission types. Although the emission reductions would be potentially substantial, it is not possible to quantify them at this time given that specific construction timing and fleet mix are unknown. However, Tier 4 equipment reduces ROG emissions 7–12 percent and NO_x and PM emissions 89–95 percent relative to Tier 3 standards in construction equipment. Furthermore, this measure requires the use of zero or near-zero emission equipment as it becomes commercially available over the life of the proposed PMPU.
- **MM-AQ-4** is required to reduce fugitive dust emissions. This measure would go beyond Rule 55 and reduce fugitive PM10 and PM2.5 emissions typically associated with earthmoving activities, demolition activities, travel on paved and unpaved roads, and storage piles. Fugitive dust control measures, such as watering construction areas every 3 hours, can reduce fugitive PM10 and PM2.5 emissions by approximately 61 percent.
- **MM-AQ-5** is required to reduce ROG emissions from architectural coatings. ROG emissions from architectural coatings are based on the amount of paint applied on a daily basis and the ROG/VOC content of that paint. The unmitigated analysis assumes compliance with SDACPD Rule 67.0. Using paints with a VOC content below that required by Rule 67.0 reduces ROG/VOC emissions and related impacts, and using no-VOC paints can eliminate ROG emissions from the architectural coatings phase entirely. This mitigation measure goes beyond Rule 67.0 and requires all future projects to use low VOC paints (75 grams per liter), and, if a certain amount of

painting would occur on a daily basis, to use lower VOC paints (10 grams per liter or lower) to ensure VOC emissions from all activities remain below SDAPCD thresholds.

- **MM-AQ-6** requires all harbor craft or dredgers used to construct new slips to use renewable diesel and meet Tier 3 or 4 emissions standards, or use zero-emission pieces of equipment, depending on when construction occurs and the availability of pieces of equipment. These measures would reduce all emission types. Although the emission reductions would be substantial, it is not possible to quantify them given that specific construction timing and fleet mix are unknown. Fully electric harbor craft emits no tailpipe emissions, eliminating all ROG, NO_x, and PM emissions. As fully electric harbor craft become more prevalent, their use during construction activities will increase.
- **MM-AQ-7** is related to **MM-AQ-6** in that this measure obligates the District to track the rollout of zero or near-zero (i.e., hybrid) harbor craft pieces both within San Diego Bay and within nearby Ports. Zero or near-zero (i.e., hybrid) harbor craft substantially reduce (or eliminate) all ROG, NO_x, and PM emissions. Their use over time will increase as new zero or near-zero technologies and models become available within the Bay and nearby.
- **MM-AQ-8** requires future project proponents to document and track activities and emissions to ensure that projects do not exceed daily thresholds individually or in combination with other projects being implemented as part of the proposed PMPU. These measures require reporting to the District and changes to the overall construction schedule if emissions would exceed thresholds.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction impact related to criteria pollutant emissions (**Impact-AQ-2**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 1 would include the same water and land uses for PD3 analyzed above. The types of construction that would occur for Option 1 would fall within the range of scenarios analyzed above. Option 1 would not include substantial building replacement, demolition, or construction, or waterside improvements that would require substantial equipment usage beyond what was assumed above. Pollutant emissions associated with reconfiguring and closing of North Harbor Drive, construction of a Waterfront Destination Park, and other improvements to open space would be similar to those in the analysis above. However, it is possible that implementation of Option 1 could result in construction that individually, or occurring concurrently with other projects associated with the proposed PMPU, could generate criteria pollutant emissions on a daily basis that exceed thresholds. Therefore, potential construction impacts associated with Option 1 are significant (**Impact-AQ-2**). Mitigation measures **MM-AQ-2**

through **MM-AQ-8** are required to mitigate construction impacts associated with buildout of Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction impact related to criteria pollutant emissions (**Impact-AQ-2**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would include the same water and land uses for PD3 analyzed above. The types of construction that would occur for Option 2 would fall within the range of scenarios analyzed above. Option 2 would not include substantial building replacement, demolition, or construction, or waterside improvements that would require substantial equipment usage beyond what was assumed above. Pollutant emissions associated with constructing additional Recreation Open Space and the expansion of the Lane Field Setback Park would be similar to those in the analysis above. However, it is possible that implementation of Option 2 could result in construction that individually, or occurring concurrently with other projects associated with the proposed PMPU, could generate criteria pollutant emissions on a daily basis that exceed thresholds. Therefore, potential construction impacts associated with Option 2 are significant (**Impact-AQ-2**). Mitigation measures **MM-AQ-2** through **MM-AQ-8** are required to mitigate construction impacts associated with buildout of Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction impact related to criteria pollutant emissions (**Impact-AQ-2**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would include the same water and land uses for PD3 analyzed above. The types of construction that would occur for Option 2 would fall within the range of scenarios analyzed above. Option 3 would not include substantial building replacement, demolition, or construction, or waterside improvements that would require substantial equipment usage beyond what was assumed above. Pollutant emissions associated with construction associated with the realignment of North Harbor Drive and the additional recreational open space would be similar to those in the analysis above. However, it is possible that implementation of Option 3 could result in construction that individually, or occurring concurrently with other projects associated with the proposed PMPU, could generate criteria pollutant emissions on a daily basis that exceed thresholds. Therefore, potential construction impacts associated with Option 3 are significant (**Impact-AQ-2**). Mitigation measures **MM-AQ-2** through **MM-AQ-8** are required to mitigate construction impacts associated with buildout of Option 3.

Operation

The net change in criteria pollutant emissions relative to existing conditions is presented for assumed conditions in both 2030 and 2050 at the daily time scale. Development assumptions are presented in Table 4.2-12 and Table 4.2-13 in Section 4.2.4.1. A summary of emission tables and associated impacts follows.

- Table 4.2-18 summarizes the net change in criteria pollutant emissions in 2030 at the daily time scale. As shown, emissions are anticipated to exceed relevant thresholds for ROG (**Impact-AQ-3**).
- Table 4.2-19 summarizes the net change in criteria pollutant emissions in 2050 at the daily time scale. As shown, emissions are anticipated to exceed relevant thresholds for ROG and CO (**Impact-AQ-3**).

The contribution to these exceedances differs by pollutant. Source contributions for both the 2030 and 2050 analysis years are as follows prior to mitigation:

- For both 2030 and 2050, area sources (e.g., coatings, consumer products) are the biggest source of ROG, which exceeds the ROG threshold by itself. Recreational boating is the next largest source of ROG emissions.
- The majority (73%) of CO emissions in 2050 (no exceedance in 2030) are associated with recreational boating, followed by energy (12%) and mobile sources (12%).
- The PM10, PM2.5, and SO_x thresholds are not exceeded in either year.

The increase in ROG and CO emissions would exceed thresholds. Therefore, **Impact-AQ-3** would be significant.

Table 4.2-18. Estimated Net New Daily Emissions Baywide in 2030 Associated with PMPU Buildout—Unmitigated (pounds per day)

Sector	Source	ROG	NO _x	CO	SO _x	PM10	PM2.5	DPM
Land Use Development	Mobile	6	8	54	<1	18	3	<1
	Area	72	<1	<1	<1	<1	<1	<1
	Energy	5	44	37	<1	3	3	-
<i>Sum of Land Use Development</i>		<u>83</u>	52	91	<1	21	6	<1
Boating	Recreational Boating	38	11	212	<1	2	2	<1
	Commercial Fishing	1	11	9	<1	<1	<1	<1
<i>Sum of Boating</i>		39	22	221	<1	3	2	<1
Total Daily for All Development		122	74	312	1	24	8	<1
<i>Threshold</i>		<i>75</i>	<i>250</i>	<i>550</i>	<i>150</i>	<i>100</i>	<i>55</i>	-
Exceed?		Yes	No	No	No	No	No	-

Source: ICF Emissions Modeling (Appendix C).

Note: Sectors or sources that individually exceed thresholds are shown in underline.

Table 4.2-19. Estimated Net New Daily Emissions Baywide in 2050 Associated with PMPU Buildout—Unmitigated (pounds per day)

Sector	Source	ROG	NO _x	CO	SO _x	PM10	PM2.5	DPM
Land Use Development	Mobile	9	14	89	<1	43	7	<1
	Area	<u>156</u>	<1	<1	<1	<1	<1	<1
	Energy	12	106	89	1	8	8	<1
<i>Sum of Land Use Development</i>		<u>176</u>	119	178	1	51	15	<1
Boating	Recreational Boating	57	23	548	<1	3	3	<1

Sector	Source	ROG	NO_x	CO	SO_x	PM10	PM2.5	DPM
	Commercial Fishing	3	27	22	<1	1	1	<1
	<i>Sum of Boating</i>	<i>60</i>	<i>50</i>	<u><i>571</i></u>	<i><1</i>	<i>4</i>	<i>3</i>	<i><1</i>
	Total Daily for All Development	237	170	749	1	56	19	1
	<i>Threshold</i>	<i>75</i>	<i>250</i>	<i>550</i>	<i>150</i>	<i>100</i>	<i>55</i>	<i>-</i>
	Exceed?	Yes	No	Yes	No	No	No	-

Source: ICF Emissions Modeling (Appendix C).

Note: Sectors or sources that individually exceed thresholds are shown in underline.

The net change in criteria pollutant emissions by planning district relative to existing conditions is presented in Table 4.2-20 for 2030 and Table 4.2-21 for 2050. As shown, the change in emissions would primarily occur in PD2 and PD3, as they would potentially see the most change in activity as part of the proposed PMPU.

Land use development could increase over time due to the proposed PMPU, resulting in an increase in emissions in PD2, PD3, and PD8. While emissions on a per unit or activity basis (e.g., per vehicle mile traveled) decrease over time as vehicles and vessels become more efficient, emissions would, for the most part, still increase because the increase in activity would outweigh the decrease in emissions on a per-activity basis.

The increase in recreational boating and commercial fishing slips would increase emissions over time in PD1, PD2, PD3, PD9, and PD10 due to the proposed PMPU. For both commercial fishing and recreational boating, the increase in emissions is due solely to the increase in activity. There are currently no regulations in place to reduce emissions from commercial fishing, sport fishing, and recreational boating. However, as of 2021, the existing CARB Commercial Harbor Craft rule (CARB 2008) exempts various harbor craft from the rule, including, but not limited to, commercial fishing, sport fishing (called charter fishing in all of CARB's rulemaking), work boats, and pilot vessels. CARB's most recent Proposed Concepts for Commercial Harbor Craft proposed extending the rule to sport fishing, commercial fishing, work boats, and pilot vessels (CARB 2020a). This rule would require all in-use sport fishing vessels (or commercial passenger fishing vessels) to be equipped with Tier 4 engines by 2030 at the latest, and all commercial fishing vessels to be equipped with Tier 2 engines between 2030 and 2032. While this rule is expected to be considered in November 2021, considered by the CARB board in early 2022, and take effect in 2023 (CARB 2019c), because it is currently in draft form, the associated emissions reductions are not quantified.

CARB is also working on a recreational marine vessel regulation to limit ROG and NO_x emissions from marine engines. CARB set standards for evaporative emissions in 2015, but the exhaust emissions standards have not been changed since 2009. As part of this rulemaking effort, CARB is currently working on a draft rule and is expected to adopt this regulation in 2026 or 2027 (CARB 2020c). While not immediate, emissions from recreational boats are likely to be much lower than assumed herein as this new regulation is implemented and new vessels are built to comply with more stringent emissions standards. Similar to the fishing fleet, because this rule is currently in draft form, the associated emissions reductions are not quantified.

Note that the increase in operations associated with PMPU buildout would not occur immediately and all at once, but would instead occur incrementally over time as regional air quality improves and regulations to reduce emissions from Port-related sources take effect.

Table 4.2-20. Estimated Net New Daily Emissions in 2030 Associated with PMPU Buildout—Unmitigated (pounds per day)

Planning District	ROG	NO _x	CO	SO _x	PM10	PM2.5	DPM
PD1: Shelter Island	4	12	25	<1	1	1	<1
PD2: Harbor Island	<u>79</u>	43	161	<1	15	5	<1
PD3: Embarcadero	33	16	89	<1	6	2	<1
PD4: Working Waterfront	--	--	--	--	--	--	--
PD7: South Bay	--	--	--	--	--	--	--
PD8: Imperial Beach Oceanfront	<1	1	2	<1	<1	<1	<1
PD9: Silver Strand	2	<1	9	<1	<1	<1	<1
PD10: Coronado Bayfront	5	1	26	<1	1	<1	<1
Total	122	74	312	1	24	8	1
<i>Threshold</i>	<i>75</i>	<i>250</i>	<i>550</i>	<i>150</i>	<i>100</i>	<i>55</i>	<i>--</i>
Exceed?	Yes	No	No	No	No	No	--

Source: ICF Emissions Modeling (Appendix C).

Note: Planning districts that individually exceed thresholds are shown in underline.

Table 4.2-21. Estimated Net New Daily Emissions in 2050 Associated with PMPU Buildout—Unmitigated (pounds per day)

Planning District	ROG	NO _x	CO	SO _x	PM10	PM2.5	DPM
PD1—Shelter Island	8	29	64	<1	2	1	1
PD2—Harbor Island	<u>161</u>	100	380	1	36	12	<1
PD3—Embarcadero	58	35	214	1	14	5	<1
PD4—Working Waterfront	--	--	--	--	--	--	--
PD7—South Bay	--	--	--	--	--	--	--
PD8—Imperial Beach Oceanfront	1	1	3	<1	1	<1	<1
PD9—Silver Strand	2	1	23	<1	<1	<1	<1
PD10—Coronado Bayfront	7	3	65	<1	2	1	<1
Total	237	170	749	1	56	19	1
<i>Threshold</i>	<i>75</i>	<i>250</i>	<i>550</i>	<i>150</i>	<i>100</i>	<i>55</i>	<i>--</i>
Exceed?	Yes	No	Yes	No	No	No	--

Source: ICF Emissions Modeling (Appendix C).

Note: Planning districts that individually exceed thresholds are shown in underline.

As noted, **Impact-AQ-3** would be significant. Mitigation measures **MM-AQ-9** through **MM-AQ-12** are proposed to mitigate operational impacts associated with buildout of the proposed PMPU. The proposed operational mitigation measures and their effect on emissions are summarized below.

- **MM-AQ-9** requires all tenants to implement sustainability measures in building design through 2030 and **MM-AQ-10** requires all development to be carbon neutral after 2030. Both measures will reduce emissions from new development by reducing energy and water consumption and waste generation. The push for carbon neutral design will increase over time, and become more standard practice during the life of the proposed PMPU. This measure has been quantified and assumes that, in 2030, new hotel uses only consume natural gas associated with cooking, which

reduces natural gas consumption from new hotels 90 percent, or reduces emissions equivalent to this reduction through implementation of other strategies. Beyond 2030, it is assumed that all new development will be carbon-neutral and will not increase natural gas consumption beyond that assumed in 2030.

- **MM-AQ-11** requires the District to develop and implement an EV charging program, and to require future development to incorporate EV charging into project design. Installing EV chargers is a supplemental measure in that it does not directly reduce emissions itself, but instead supports local, regional, and statewide efforts to increase usage of zero emission electric vehicles. While the emission reductions associated with this measure have not been quantified in the mitigated emissions analysis because details (e.g., location, usage per day) have not yet been developed, it is estimated that the 422 publicly accessible chargers in 2030 could reduce new VMT 1.2 percent and the 530 publicly accessible chargers in 2050 could reduce emissions associated with mobile sources 0.74 percent, assuming all new vehicle trips have access to these chargers (i.e., they are in high-traffic areas) and assuming four vehicles access each charger on a daily basis (CARB 2019a, NREL 2014). While the estimated emission reductions are shown here, the emission reductions have not been applied to the mitigated emissions analysis.
- **MM-AQ-12** requires marina operators to install dockside electrical infrastructure for boats to plug into when docked. CARB notes that there are opportunities to electrify many recreation boats, specifically small outboard engines (less than 19 kilowatts). Many of these options are drop-in ready. The marina operators will provide charging infrastructure at marinas and will promote public awareness. This measure will reduce all emission types, particularly ROG and CO emissions associated with recreational boating exhaust emissions and evaporative losses. This measure has not been quantified because the specifics have not yet been developed.

The District is engaged in other efforts that will help to reduce emissions from the proposed PMPU that have not reached the stage where they are sufficiently specific to be recommended as mitigation measures at this time. If these measures are completed and adopted in the future, they may be considered in the site-specific analysis of future development allowed under the proposed PMPU. These measures are described below.

The District continues to work with stakeholders and SDAPCD on the AB 617 Portside Steering Committee to help advance near-term emission reduction strategies identified in the AB 617 CERP for port-related operations and activities. The CERP focuses on strategies to monitor air pollution and to develop and implement strategies to reduce emissions and health impacts in communities most impacted by air pollution. Given the Port's location and operations, many of the strategies are aimed at goods movement and industrial operations on the waterfront, and include strategies to fund the transition to zero-emission trucks and equipment. While the focus is on reducing pollution that directly contributes to the health burden in the adjacent communities, these strategies are aimed at reducing all emission types Port-wide. CERP strategies have not been quantified because all the details regarding implementation have not yet been finalized, and the actions in the CERP are being implemented regardless of the proposed PMPU. The Phase II Final CERP includes emission reduction strategies related to heavy duty trucks and Working Waterfront activities associated with the Port, Navy, and shipyards. Chapter 7 of the CERP identifies additional strategies to reduce diesel emissions from cargo handling equipment, ships at berth, truck electrification, and portable air compressors that are used at the Port's three major shipyards. These specific emission reduction measures are aspirational in nature and will not be required by CARB or SDAPCD and will not be quantified because long-term implementation cannot be guaranteed. However, ongoing

participation on the AB 617 CERP Steering Commission is ongoing because it is a feasible, short-term measure that may help reduce air quality impacts associated with the Working Waterfront.

As discussed in Section 4.2.3.4, the MCAS includes various emission reduction goals and strategies to achieve those goals, although the goals are not mandatory as feasibility may not be achievable. Most of the strategies in the MCAS go beyond regulatory requirements, and may achieve emission reductions at the two cargo terminals; at the cruise ship terminal; along the entire Working Waterfront; and with the District's fleet of vehicles, equipment, and marine vessels. The Draft Revised Draft MCAS was released for public review in August 2021 and was adopted by the District Board of Port Commissioners in October 2021. The goals and strategies will guide the District's investments in zero emissions technology and electrification and allow the District to help tenants and terminal operators prioritize replacements over time. As noted in the MCAS document, the MCAS is intended to guide future decision-making and provide a planning framework for potential future actions that may be implemented to achieve the goals and objectives identified in the MCAS. The MCAS focuses on maritime and shipyard activities. Measures from both the MCAS and potentially the CERP will be applicable to new projects as they arise.

Tenth Avenue Marine Terminal

Since the TAMT EIR was adopted in late 2016, several regulations have been adopted, which would apply to future development under the TAMT Redevelopment Plan and will reduce emissions at TAMT long-term.

In June 2020, CARB adopted the Advanced Clean Truck Regulation, which promotes zero-emission technology penetration with sales requirements for medium- and heavy-duty truck manufacturers. In August 2020, CARB expanded the At-Berth Regulation to other vessels, although the impact on TAMT may be small given that container ships were already covered and TAMT rarely if ever sees the types of vessels that were added (Ro/Ro, auto carriers, tankers). In September 2020, Governor Newsom signed EO N-79-20, which establishes various zero-emission goals, including a goal that 100 percent of new passenger car and trucks sales be zero-emission by 2035, all drayage trucks be zero-emission by 2035, all off-road equipment be zero-emission where feasible by 2035, and the remainder of medium- and heavy-duty vehicles be zero-emission where feasible by 2045. Under EO N-79-20, CARB is tasked to work with State agencies to develop regulations to achieve these goals, while accounting for technological feasibility and cost effectiveness. While the goals under EO N-79-20 are not law, it is likely that CARB will adopt rules per this EO in the coming years (CARB 2020c).

These regulations will affect emissions from TAMT in several ways. In particular, the emission estimates in the TAMT EIR, associated with buildout of TAMT Redevelopment Plan in 2035, are likely overestimated in that regulations to reduce emissions from vessels and trucks, considered in the TAMT EIR, do not incorporate the newly adopted rules that will substantially reduce emissions. Over the long-term, emissions from some sources, such as trucks, may effectively be zero, which was not assumed in the TAMT EIR.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses.

Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant operational impact related to criteria pollutant emissions (**Impact-AQ-3**). This significant impact would still occur within PD3 under Option 1, as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 1 would include the same water and land uses for PD3 analyzed above. Operations that would occur for Option 1 would fall within the range of scenarios analyzed above. Option 1 would not include new uses that generate substantial emissions, and pollutant emissions associated with a Waterfront Destination Park and other improvements to open space would be similar to those in the analysis above. Option 1 could generate criteria pollutant emissions on a daily basis that exceed thresholds. Therefore, operational impacts associated with Option 1 are significant (**Impact-AQ-3**).

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant operational impact related to criteria pollutant emissions (**Impact-AQ-3**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would include the same water and land uses for PD3 analyzed above. Operations that would occur for Option 2 would fall within the range of scenarios analyzed above. Option 2 would not include new uses that generate substantial emissions, and pollutant emissions associated with operation of additional Recreation Open Space and the expansion of the Lane Field Setback Park would be similar to those in the analysis above. Option 2 could generate criteria pollutant emissions on a daily basis that exceed thresholds. Therefore, operational impacts associated with Option 2 are significant (**Impact-AQ-3**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant operational impact related to criteria pollutant emissions (**Impact-AQ-3**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would include the same water and land uses for PD3 analyzed above. Operations that would occur for Option 3 would fall within the range of scenarios analyzed above. Option 3 would not include new uses that generate substantial emissions, and pollutant emissions associated with the additional recreational open space would be similar to those in the analysis above. Option 3 could generate criteria pollutant emissions on a daily basis that exceed thresholds. Therefore, operational impacts associated with Option 3 are significant (**Impact-AQ-3**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to a cumulatively considerable net increase of criteria pollutants for which the PMPU region is classified as nonattainment under an applicable Federal or State ambient air quality standard. Rather, the proposed PMPU policies listed in Section 4.2.4.3 would reduce potential impacts related to increases in criteria pollutants by implementing clean air action measures to reduce emissions, such as efficient buildings design features and promoting the use of alternative fuels or electric powered vehicles and vessels (ECO Policy 3.1.2), encouraging and facilitating deployment of net zero carbon emission projects and technologies (SR Policy 3.1.2), deploying renewable energy technology, and pursuing various strategies to reduce emissions (SR Policy 3.1.1 and SR Policy 3.1.3), and increasing the efficiency of cargo movements (ECON Policy 2.3.2).

Impact Determination and Mitigation

Implementation of the proposed PMPU would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard.

Significant Impacts

Impact-AQ-2: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Construction. Project emissions during construction activities, before mitigation, would exceed thresholds for ROG, NO_x, and CO. Specific construction details (such as project design, location, timing, phasing, and overlapping of possible construction projects that would be implemented over the life of the proposed PMPU) are not known at this time, but the emissions analysis demonstrates the potential for construction emissions to exceed thresholds. As a result, the proposed PMPU would have a significant impact on air quality because future development allowed under the proposed PMPU may result in a cumulatively considerable net increase in criteria pollutants for which the proposed PMPU region is in nonattainment under Federal or State regulations.

Impact-AQ-3: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Operations. Project emissions during operations, before mitigation, would exceed thresholds for VOC, NO_x, CO, PM10, and PM2.5. As a result, the proposed PMPU would have a significant impact on air quality because future development allowed under the proposed PMPU may result in a cumulatively considerable net increase in criteria pollutants for which the proposed PMPU region is in nonattainment under Federal or State regulations.

Mitigation Measures

For **Impact-AQ-2:**

MM-AQ-2: Implement Best Management Practices During Construction of all Future PMPU-Consistent Projects. A project proponent shall implement, or require implementation by its construction contractor(s), the following measures during construction and project operations, subject to verification by the District.

- All project proponents shall limit all construction equipment, drayage, and delivery truck idling times by shutting down equipment when not in use and reducing the maximum idling time to less than 3 minutes. The project proponent shall install clear signage regarding the

limitation on idling time at the delivery driveway and loading areas, if applicable, and shall submit annual reports of violators to the District. This measure shall be enforced by the hotel, restaurant, and marina supervisors; and project proponents with more than one violation shall be subject to penalties pursuant to California airborne toxics control measure 13 CCR 2485. The project proponent shall submit evidence of the use of diesel emission reduction measures to the District's Planning and Green Port Department through annual reporting, with the first report due 1 year from the date of project completion and each subsequent report due exactly 1 year after, noting all violations with relevant identifying information of the vehicles and drivers in violation of these measures.

- The project proponent shall verify that all construction equipment is maintained and properly tuned in accordance with manufacturers' specifications. Prior to the commencement of construction and operations activities using diesel-powered vehicles or equipment, the project proponent shall verify that all vehicles and equipment have been checked by a certified mechanic and determined to be running in proper condition prior to admittance into the delivery driveway and loading areas. The project proponent shall submit a report by the certified mechanic of the condition of the construction vehicles and equipment to the District's Planning and Green Port Department during the operation phase prior to commencement of their use.

MM-AQ-3: Implement Diesel Emission-Reduction Measures During Construction of All Future PMPU-Consistent Projects. To reduce ROG and CO emissions during construction of future development under the proposed PMPU, the project proponent shall implement or require implementation by its construction contractor(s) the following measures during construction of the project, and shall provide verification to the District prior to the issuance of a building permit. Prior to the commencement of construction activities for any discretionary project—where the definition of discretionary project meets the definition of the State CEQA Guidelines, and such project is allowed by the PMPU water and land use designations, such as new hotel rooms, restaurant/retail square footage, or boat slips—the project proponent for that project shall submit a list of equipment to be used and the equipment's specifications (model year, engine tier, horsepower) to the District's Development Services Department to ensure the construction equipment list is consistent with the following requirements. After construction, the project proponent/operator and/or its contractor(s) shall provide written evidence that the construction was consistent with the requirements.

- For all construction activities, equip all off-road diesel equipment engines over 25 horsepower with EPA Tier 4 or cleaner engines unless Tier 4 construction equipment is not available within 50 miles of the project site. The project proponent shall submit written evidence to the District prior to commencement of construction activities that Tier 4 or cleaner equipment shall be used, or that Tier 4 or cleaner equipment is not available for use during the entire duration of that project's construction period beyond 2025.
- Use renewable diesel fuel in all heavy-duty off-road diesel-fueled equipment. Renewable diesel must meet the most recent ASTM D975 specification for Ultra Low Sulfur Diesel and have a carbon intensity no greater than 50 percent of diesel with the lowest carbon intensity among petroleum diesel fuels sold in California.
- Use zero or near-zero emissions equipment in lieu of diesel- or gasoline-powered equipment where such zero or near-zero equipment is commercially available within 50 miles of the project site.

- Use diesel particulate filters (or the equivalent) if permitted under manufacturer's guidelines for on-road and off-road diesel equipment.

MM-AQ-4: Implement Fugitive Dust Control During Construction of All PMPU-Consistent Projects. During construction of any discretionary project—where the definition of discretionary project meets the definition of the State CEQA Guidelines, and such project is allowed by the PMPU water and land use designations, such as new hotel rooms, restaurant/retail square footage, or boat slips—the project proponent shall implement the following dust control measures that go beyond SDAPCD Rule 55. The project proponent shall submit evidence of the use of fugitive dust reduction measures to the District.

- Water the grading areas, if any, at a minimum of three times daily to minimize fugitive dust.
- Stabilize graded areas, if any, immediately after grading, to minimize fugitive dust.
- Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry.
- Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads.
- Remove any visible track-out into traveled public streets within 30 minutes of occurrence.
- Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred.
- Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads.
- Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling.
- Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 mph.
- Cover/water onsite stockpiles of excavated material.
- Enforce a 15-mph speed limit on unpaved surfaces.
- Sweep up any dirt and debris spilled onto paved surfaces immediately to reduce resuspension of particulate matter caused by vehicle movement. Clean approach routes to construction sites daily for construction-related dirt in dry weather.
- Hydroseed, landscape, or develop as quickly as possible all disturbed areas and as directed by the District and/or SDAPCD to reduce dust generation.

MM-AQ-5: Use Low-VOC Interior and Exterior Coatings During Construction of All PMPU-Consistent Projects. To reduce VOC emissions from painting activities during construction, the project proponents/operator and/or its contractor(s) that uses coatings shall use low-VOC coatings for all surfaces that go beyond the requirements of SDAPCD Rule 67.0. If architectural coatings (painting) of any single component or multiple components would exceed 10,000 square feet per day, then each project component active on that day shall use coatings with a VOC content of 10 grams per liter or less for all surfaces to be painted. If architectural coatings (painting) of any single component or multiple components would be below 10,000 square feet per day, then each component shall use coatings with a VOC content of 75 grams per liter or less. Prior to the commencement of construction activities of any project component, the project proponent shall submit a list of coatings to be used, their respective VOC content, and a

summary of surface area to be painted to the District's Development Services Department. The District shall conduct inspections during construction as needed to verify the use of low-VOC coatings.

MM-AQ-6: Use Modern Harbor Craft and Dredgers During Construction Activities. Prior to waterside construction, the project proponent shall ensure that any harbor craft, including but not limited to tugboats, pusher tugs, tow boats, work boats, crew and supply boats, and dredgers for use during the duration of any in-water work shall meet the following criteria:

- For all construction activities through 2025, ensure all equipment is Tier 3 or better (cleaner).
- For all construction activities after 2025, ensure all equipment is alternatively fueled or electrically powered. If alternatively fueled or electrically powered equipment that emits less emission than Tier 4 or better (cleaner) is not available, then the project proponent shall ensure all equipment is Tier 4 or better.
- Use renewable diesel fuel in all heavy-duty off-road diesel-fueled equipment. Renewable diesel must meet the most recent ASTM D975 specification for Ultra Low Sulfur Diesel and have a carbon intensity no greater than 50 percent of diesel with the lowest carbon intensity among petroleum diesel fuels sold in California.

If clean harbor craft and dredgers are not available within 200 miles of the project site for the duration of all dredging activities, the project proponent shall prioritize use of equipment that is maintained and properly tuned in accordance with manufacturers' specifications. The project proponent shall document and submit evidence to the District's Development Services Department prior to commencement of waterside construction activities that tugboats, survey vessels, and dredgers meeting the above tiering requirements or better standards are not available for use during the duration of all in-water activities. Regardless of the equipment used, the project proponent shall verify that all equipment has been checked by a mechanic experienced with such equipment and determined to be running in proper condition prior to admittance into the construction area. The project proponent shall submit a report prepared by the mechanic experienced with such equipment of the condition of the construction and operations vehicles and equipment to the District's Development Services Department prior to commencement of their use.

MM-AQ-7: Conduct an Annual Technology Review for Construction Activities. To promote new emission control technologies during construction activities, the District will perform a Periodic Technology Review annually. The Periodic Technology Review shall include a review of technological advancements in the form of alternative-fuel or zero emissions construction equipment, vessels, or trucks.

- If the Periodic Technology Review identifies new technology that will be effective in reducing emissions compared to default construction equipment, vessels, and trucks, and the District determines that use of the technology is feasible, the District shall require the use of such technology as a condition of any subsequent discretionary approval issued by the District.

MM-AQ-8: Project-Level Environmental Reviews. If project-level environmental review of future development projects allowed under the PMPU is required, the District shall prepare or cause the preparation of an air quality technical report that analyzes all phases of project

construction and operations and determine whether emissions would exceed SDAPCD thresholds. If a project's air quality technical report determines that construction or operations emissions exceed the SDAPCD threshold(s), the project proponent shall be required to implement site-specific mitigation measures to avoid or reduce emissions to SDAPCD thresholds. Where mitigation measures are required, the District shall identify these measures in the project-level environmental document and include them in a mitigation monitoring and reporting program (MMRP) for the individual development project.

For **Impact-AQ-3**:

MM-AQ-9: Incorporate Sustainability Measures in All Development through 2030. Project proponents shall incorporate into project design for new project components various efficiency and sustainability measures to reduce emissions from energy, water, and solid waste. The following measures shall apply in all planning districts through 2030.

Energy

- Incorporate energy efficiency design features that exceed 2019 Title 24 California Building Energy Efficiency Standards by 20 percent, or comply with any updates to Title 24 Building Energy Efficiency Standards. Measures that may be implemented include, but are not limited to:
 - Use only fluorescent, light-emitting diode (LED), compact fluorescent lamp (CFL), or the most energy-efficient lighting that meets required lighting standards and is commercially available. This measure also requires replacement of existing lighting on the project site if not already highly energy efficient.
 - Install occupancy sensors for vending machines, if any, in new buildings at the project site.
 - Implement onsite renewable energy to new buildings, unless the District determines the system cannot be built in light of structural and operational constraints.
 - Install co-generation systems (i.e., combined heat and power systems) in new buildings, if deemed feasible by the District.
 - Use high-performance glazing with a low solar heat gain coefficient value that reduces the amount of solar heat allowed into the building.
 - Install increased insulation with an R value of 49 or better.
 - Install cool roofs with an R value of 30 or better.
 - Use sun shading devices in parking lots and asphalted common areas.
 - Install high-efficiency heating, ventilating, and air condition systems and controls.
 - Install programmable thermostats.
 - Install Energy Star rated appliances.

Water

- Reduce indoor water consumption by 20 percent lower than baseline buildings (defined by Leadership in Energy and Environmental Design [LEED] as indoor water use after meeting

Energy Policy Act of 1992 fixture performance requirements) through use of low-flow fixtures in all bathrooms.

- Install low-water plantings and drip irrigation, and minimize domestic water demand the system for landscaping purposes. Use recycled or grey water for landscaping, if available.

Waste

- Comply with AB 341 and the relevant jurisdiction's recycling ordinances, and include recycling at least 50 percent of solid waste. Compliance with relevant jurisdiction's construction and demolition waste requirements shall be mandatory and shall include recycling at least 65 percent of all construction and demolition debris. This measure shall be applied during construction and operation of a project.
- Ensure that all commercial, restaurant, and retail uses implement recycling, composting of food waste and other organics, and the use of reusable products instead of disposal of products thus diverting solid waste from the landfill stream.

Mobile Sources

- Ensure that each project component implements a Transportation Demand Management plan that incentivizes, to the extent allowed by law, voluntary implementation of employer commuting measures, such as carpooling, transit subsidies, and vanpools to reduce worker trips and parking demand, as described in **MM-TRA-3**.
- Ensure that bicycle parking is included in new building construction or renovation of buildings. The number of spaces will be at a minimum 5 percent of new automobile parking spaces

Carbon Sequestration and Land Use

- Install trees and shrub planters throughout the project area as part of the landscape plan.

MM-AQ-10: Require All New Hotels to Reduce Natural Gas Prior to 2030 and All New Development to be Carbon Neutral After 2030. For all new hotel projects prior to 2030, the District shall require all new hotel projects to forbid the use of natural gas usage except for cooking and kitchen uses, or achieve equivalent reductions through other energy or emission reduction strategy. For all new development after 2030, the District shall require all development to meet the State's Zero Net Energy (ZNE) standards, if adopted. If by 2030, no ZNE standard has been adopted by the State, the District shall require all project proponents to construct ZNE buildings or submit written documentation as to why ZNE standards cannot be complied with. Moreover, the District shall encourage project developers to construct all-electric buildings. The project proponent shall document and submit evidence to the District's Development Services Department prior to commencement of construction activities.

MM-AQ-11: Install EV Charging Infrastructure. The project proponents shall provide electric vehicle (EV) ready parking spaces, at a rate of a minimum of six percent of the total required new parking spaces, as part of any new building construction or renovation of buildings. The District shall install, or cause the installation of, EV charging infrastructure on Tidelands. These installations shall at minimum include, but not be limited to: 1) 400 Level 2 chargers and 22 DC Fast chargers, by 2030; and 2) Installation of 500 Level 2 chargers and 30 DC Fast chargers, by 2050. This is based on recommendations in the CSE EV Infrastructure Scoping Study.

MM-AQ-12: Advance Recreational Boat Electrification. The project proponent of any future site-specific development that proposes to add recreational boat slips shall install a 240-volt electrical outlet at each new slip.

Level of Significance After Mitigation

Impact-AQ-2 would be reduced to less than significant after implementation of **MM-AQ-2** through **MM-AQ-8**. Mitigation would reduce VOC, NO_x, and PM₁₀ emissions below thresholds. Specifically, **MM-AQ-3** requires the use of Tier 4 equipment for all development allowed under the proposed PMPU, which would reduce ROG and NO_x, and all emission types associated with construction equipment exhaust. Further, ROG emissions are due mostly to architectural coating (painting) during construction of new landside development. **MM-AQ-4** requires dust control methods to reduce fugitive PM₁₀ and PM_{2.5} dust associated with earthmoving activities, demolition activities, and storage piles. **MM-AQ-5** requires the use of low-VOC coatings (75 grams per liter [g/L]) for all construction projects, and for projects that include enough painting to exceed thresholds, super compliant (10 g/L) coatings are required. **MM-AQ-8** requires new development projects to identify ways to reduce impacts during the environmental review process. This would ensure that large phases do not overlap. For the proposed PMPU, ensuring that waterside construction phases do not overlap would ensure that activities associated with future development allowed under the proposed PMPU would be below the applicable significance thresholds after mitigation. As such, construction of the proposed project would not violate an air quality standard or contribute substantially to an existing or projected air quality standard. Therefore, when combined with contributions of nonattainment pollutant emissions of past, present, and probable future projects, the proposed project's contribution of nonattainment pollutants would be less than cumulatively considerable during construction.

Similarly, mitigation measures **MM-AQ-2** through **MM-AQ-8** would reduce impacts related to construction air quality associated with Options 1, 2, and 3. Therefore, construction under any of the three options would not result in a cumulatively considerable net increase of a criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard, and would be considered less than significant following mitigation.

As shown in Tables 4.2-24 and 4.2-25, operational emissions of ROG would remain above thresholds in 2030 and operational emissions of ROG and CO would remain above thresholds in 2050 after implementation of **MM-AQ-9** through **MM-AQ-12**. As such, operation of future development allowed under the proposed PMPU would result in a cumulatively considerable net increase of criteria pollutants for which the project region is nonattainment under an applicable Federal or State ambient air quality standard during operation. **Impact-AQ-3** would be considered significant and unavoidable.

Similarly, **MM-AQ-9** through **MM-AQ-12** would reduce impacts related to operational air quality associated with the proposed PMPU, if any of the Options 1, 2, and 3 were included with the proposed PMPU. However, impacts would remain significant. Therefore, **Impact-AQ-3** of the proposed PMPU, with the inclusion of one option, or a combination of options, would result in a cumulatively considerable net increase of criteria pollutants for which the project region is nonattainment under an applicable Federal or State ambient air quality standard. **Impact-AQ-3** would be considered significant and unavoidable.

Table 4.2-22. Construction Emission Estimates Associated with All Development—Mitigated (pounds per day)

Phase	ROG	NO _x	CO	SO _x	PM10	PM2.5	DPM
Demolition ¹	2	30	30	<1	15	3	<1
Site Preparation ¹	1	2	21	<1	8	4	<1
Grading ¹	1	3	33	<1	4	2	<1
Building Construction ¹	9	52	89	1	28	8	<1
Paving ¹	<1	1	18	<1	<1	<1	<1
Architectural Coating ²	26	1	9	<1	4	1	<1
Waterside Construction ³	10	66	126	<1	3	3	3
Maximum Daily	48	155	326	1	63	21	4
<i>Thresholds</i>	75	250	550	250	100	55	-
Exceed?	No	No	No	No	No	No	-

Source: Appendix C. Totals may not add exactly due to rounding.

¹ Assumes all off-road construction equipment is Tier 4 for all phases (MM-AQ-3).

² Assumes super-low VOC paints (10 g/L) used for all painting activities (MM-AQ-5).

³ Assumes waterside phases stagger and do not overlap on a given day (MM-AQ-8). Values are for the Pier and Deck Pilings phase, which has the highest emissions of the waterside construction phases.

Table 4.2-23. Estimated Net New Daily Emissions Baywide in 2030 Associated with PMPU Buildout—Mitigated (pounds per day)

Sector	Source	ROG	NO _x	CO	SO _x	PM10	PM2.5	DPM
Land Use Development	Mobile	4	7	40	<1	2	1	<1
	Area	108	<1	<1	<1	<1	<1	<1
	Energy	7	67	56	<1	5	5	--
<i>Sum of Land Use Development</i>		119	74	96	1	8	6	<1
Boating	Recreational Boating	38	11	212	<1	2	2	<1
	Commercial Fishing	<1	3	2	<1	<1	<1	<1
<i>Sum of Boating</i>		38	13	214	<1	2	2	<1
Total Daily for All Development		157	87	311	1	10	8	<1
<i>Threshold</i>		75	250	550	150	100	55	--
Exceed?		Yes	No	No	No	No	No	--

Source: Appendix C.

Note: emissions may not sum due to rounding.

Table 4.2-24. Estimated Net New Daily Emissions Baywide in 2050 Associated with PMPU Buildout—Mitigated (pounds per day)

Sector	Source	ROG	NO _x	CO	SO _x	PM10	PM2.5	DPM
Land Use Development	Mobile	7	11	75	<1	36	6	<1
	Area	108	<1	<1	<1	<1	<1	<1
	Energy	7	67	56	<1	5	5	--
<i>Sum of Land Use Development</i>		121	83	139	1	11	8	<1

Sector	Source	ROG	NO_x	CO	SO_x	PM10	PM2.5	DPM
Boating	Recreational Boating	57	23	548	<1	3	3	<1
	Commercial Fishing	1	6	5	<1	<1	<1	<1
<i>Sum of Boating</i>		58	29	553	<1	4	3	<1
Total Daily for All Development		179	112	693	1	15	10	<1
<i>Threshold</i>		<i>75</i>	<i>250</i>	<i>550</i>	<i>150</i>	<i>100</i>	<i>55</i>	<i>--</i>
Exceed?		Yes	No	Yes	No	No	No	--

Source: Appendix C.

Note: emissions may not sum due to rounding.

Threshold 3: Expose sensitive receptors to substantial pollutant concentrations?

Impact Analysis

Impacts of Water and Land Uses

The discussion of pollutant concentrations associated with diesel particulate matter, carbon monoxide hotspots and criteria pollutants, during both the construction and operation of future development allowed under the proposed PMPU, is provided below.

Sensitive receptors are defined as locations where pollutant-sensitive members of the population may reside or where the presence of air pollutant emissions could adversely affect use of the land, and typically include residential areas, hospitals, daycare facilities, elder-care facilities, elementary schools, and parks. There are no residential uses within the tidelands, but the tidelands border residential uses throughout. There are recreational (park) uses within tidelands, which are considered sensitive receptors.

Diesel Particulate Matter

DPM, which is classified as a carcinogenic TAC by CARB, is the primary exhaust pollutant of concern with regard to health risks to sensitive receptors. Diesel-powered vehicles, equipment, and vessels that operate throughout the proposed PMPU area would emit DPM that could potentially expose nearby sensitive receptors to pollutant concentrations. Prolonged exposure to DPM can increase the risk of cardiovascular, cardiopulmonary, and respiratory disease, and lung cancer. Consistent with CARB rulemaking, the discussion below focuses on DPM (CARB 2018b).

Construction

Construction of future development allowed under the proposed PMPU would be sporadic and take place periodically over an approximately 30-year timeframe throughout the entire PMPU area. While this timeframe is similar to the assumed 30- or 70-year exposure period typically used to estimate lifetime cancer risks, construction in any single location would be short term and much less than the 30- or 70-year exposure period typically used to estimate lifetime cancer risks. Typical construction projects result in minimal DPM emission-related health effects, as construction is temporary and transient in nature. However, some construction projects, such as larger infrastructure projects or high-rise hotels, particularly those with substantial earthwork, may result in elevated emissions and associated pollutant concentrations, especially if construction occurs near

existing residential, school, or other sensitive uses. However, such projects would be short-term in nature, and any associated emissions and pollutant concentrations would be temporary and much less than the 30- or 70-year exposure period typically used to estimate lifetime cancer risks.

Although specific details needed to assess construction-related emissions at individual locations are not available at this time, construction DPM levels associated with future buildout are expected to be minimal. Construction at any single site would be short term and transitory, result in minimal emissions, and occur at distances not expected to expose sensitive receptor locations to substantial pollutant concentrations. As such, impacts from the emission of DPM during construction would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant construction impact related to exposing nearby sensitive receptors to pollutant concentrations. This impact would be similar within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 1 would include the same water and land uses for PD3 analyzed above. The types of construction that would occur for Option 1 would fall within the range of scenarios analyzed above. Option 1 would not include substantial building replacement, demolition, or construction, or waterside improvements that would require substantial equipment usage beyond what was assumed above. DPM emissions associated with reconfiguring and closing of North Harbor Drive, construction of a Waterfront Destination Park, and other improvements to open space would be similar to those in the analysis above. There are recreational (park) sensitive receptors within PD3, and there are residential uses immediately adjacent (across Pacific Highway). Regardless, construction of Option 1 would not expose these sensitive uses to substantial DPM concentrations and increased health risk. Therefore, potential construction impacts associated with Option 1 are less than significant. This would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant construction impact related to exposing nearby sensitive receptors to pollutant concentrations. This impact would be similar within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would include the same water and land uses for PD3 analyzed above. The types of construction that would occur for Option 2 would fall within the range of scenarios analyzed above. Option 2 would not include substantial building replacement, demolition, or

construction, or waterside improvements that would require substantial equipment usage beyond what was assumed above. DPM emissions associated with constructing additional Recreation Open Space and the expansion of the Lane Field Setback Park would be similar to those in the analysis above. There are recreational (park) sensitive receptors within PD3, and there are residential uses immediately adjacent (across Pacific Highway). Regardless, construction of Option 2 would not result in construction that expose these sensitive uses to substantial DPM concentrations and increased health risk. Therefore, potential construction impacts associated with Option 2 are less than significant. This would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant construction impact related to exposing nearby sensitive receptors to pollutant concentrations. This impact would be similar within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would include the same water and land uses for PD3 analyzed above. The types of construction that would occur for Option 3 would fall within the range of scenarios analyzed above. Option 3 would not include substantial building replacement, demolition, building demolition or construction, or waterside improvements that would require substantial equipment usage beyond what was assumed above. There are recreational (park) sensitive receptors within PD3, and there are residential uses immediately adjacent (across Pacific Highway). Regardless, construction of Option 3 would not result in construction that expose these sensitive uses to substantial DPM concentrations and increased health risk. Therefore, potential construction impacts associated with Option 3 are less than significant. This would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Operations

Operation of future development allowed under the proposed PMPU would increase activities that may expose sensitive receptors to substantial pollutant concentrations. The net change in annual DPM emissions due to new development relative to existing conditions by emission source is presented in Table 4.2-25. A summary of DPM emissions associated with new development by planning district is presented in Table 4.2-26. A summary of DPM emissions associated with existing maritime operations by planning district is shown above in Table 4.2-9.

The majority of new DPM emission sources shown in Table 4.2-25 occur in diffuse locations that are away from sensitive receptors. For instance, all emissions related to new land use development (mobile, area, and energy sources) occur throughout the entire PMPU area. Additionally, fishing and boating activity occurs throughout the entire Bay as well as outside of the Bay, with only minimal emissions occurring near the slips or in-harbor berthing areas. Emissions from these uses would be temporary and transitory and occur at distances not expected to expose sensitive receptor locations to substantial pollutant concentrations. Onsite truck idling would be minimal for future uses, limited to a maximum of 5 minutes per truck at any one location, consistent with CARB's Heavy-Duty Idling Reduction Program, while truck activity would be limited to infrequent deliveries to supply materials for proposed waterside and landside uses (e.g., new hotel rooms, new commercial areas).

DPM emissions associated with future development allowed under the proposed PMPU would be minor. For comparison purposes, the emissions in Tables 4.2-25 and 4.2-26 are minor compared to

those from existing maritime uses, shown in Table 4.2-9. Thus, the increase in DPM emissions baywide is minor.

The predominant wind direction within the proposed PMPU area is west to west-northwest, with infrequent daytime calm winds (approximately 5% of the time at both Chula Vista and Lindbergh Field stations). Daytime winds (which average 5.1 mph at Chula Vista and 7.6 mph at Lindbergh Field stations) will potentially disperse pollutants away from the nearest residential and recreational receptors. The proposed PMPU may also create a nuisance for nearby visitors during hours of construction and operations, as diesel trucks could create occasional exposure to exhaust, but this would be minimal. As such, impacts from the emission of DPM during operations would be less than significant.

Table 4.2-25. Estimated Net New Annual Diesel Particulate Matter Emissions Baywide Associated with PMPU Buildout—Unmitigated (pounds per year)

Sector	Source	2030	2050
Land Use Development	Mobile	24	49
	Area	--	--
	Energy	--	--
<i>Sum of Land Use Development</i>		24	49
Boating	Recreational Boating	43	68
	Commercial Fishing	118	285
<i>Sum of Boating</i>		162	353
Total for All Development		185	402

Table 4.2-26. Estimated Net New Annual Diesel Particulate Matter Emissions by Planning District—Unmitigated (pounds per year)

Sector	2030	2050
PD1: Shelter Island	122	291
PD2: Harbor Island	35	63
PD3: Embarcadero	20	34
PD4: Working Waterfront	--	--
PD7: South Bay	--	--
PD8: Imperial Beach Oceanfront	1	1
PD9: Silver Strand	2	3
PD10: Coronado Bayfront	6	9
Total	185	402

Carbon Monoxide Hotspots

Additional traffic created by future development allowed under the proposed PMPU would have the potential to create CO hot spots at nearby roadways and intersections. To provide a conservative analysis, CO concentrations were modeled to estimate pollutant concentrations at the most congested roadway in the PMPU area: North Harbor Drive at Winship Lane. Full buildout volumes

were provided by the traffic engineers (Appendix D). This analysis is based on the Harbor Drive at Winship Lane intersection at full buildout volumes, and assumes existing year (2016) emission rates remain consistent over time. Background CO concentrations were taken from the San Diego–Beardsley Street Station, which monitored CO through 2016. Background CO concentrations are well below NAAQS and CAAQS.

Table 4.2-27 presents the results of the CO hot-spot modeling and indicates that implementation of the proposed PMPU would not violate the State or Federal 1- or 8-hour CO standards at full buildout. Consequently, the impact of traffic conditions from the proposed PMPU on ambient CO levels is considered less than significant. Note that the CO hot-spot modeling used a set of conservative assumptions that assumed all traffic in the peak hour would operate at slow speeds under worst-case meteorological conditions. Actual concentrations are likely to be much lower.

Table 4.2-27. Modeled CO Concentrations (parts per million)

Roadway	1-Hour	8-Hour
Background Concentration from Beardsley Street Station	2.6	1.9
PMPU Contribution at Harbor Drive and Winship Lane	2.6	1.8
Total Concentration at Harbor Drive and Winship Lane	5.2	3.7
Threshold (NAAQS/CAAQS)	35/20	9/9.0
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>

Source: Appendix C.

Criteria Pollutants

ROG and NO_x emissions can result in the formation of ozone. Ozone poses a higher risk to those who already suffer from respiratory diseases (e.g., asthma), children, older adults, and people who are active outdoor. Exposure to ozone at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggregate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation. Exposure to CO at concentrations above the CAAQS or NAAQS (see Table 4.2-4) can also cause fatigue, headaches, confusion, dizziness, and chest pain. Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease. Other symptoms of exposure may include nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. DPM is a subset of PM₁₀ and PM_{2.5} and is a known carcinogen.

As discussed above, SDAPCD has developed region-specific CEQA thresholds of significance for use in consideration of existing air quality concentrations and attainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence regarding safe concentrations of criteria pollutants. Recognizing that air quality is a cumulative problem, SDAPCD- and County-recommended thresholds typically consider projects that generate criteria pollutants and ozone precursor emissions that are below the thresholds to be minor in nature. Such projects would not adversely affect air quality or exceed the NAAQS or CAAQS. As described under Threshold 2, construction of development associated with PMPU buildout may generate ROG, NO_x, or PM₁₀ in excess of SDAPCD- and County-recommended numeric thresholds over the life of the PMPU if a

number of development projects occur concurrently. Moreover, buildout of the proposed PMPU may result in emissions of ROG, NO_x, and PM₁₀ emissions in excess of thresholds before mitigation. Mitigation Measures **MM-AQ-2** through **MM-AQ-8** would ensure that emissions during construction would be minimized. As such, construction of development under the proposed PMPU would not be expected to contribute a significant level of air pollution that would degrade regional air quality within the SDAB.

In terms of analyzing project-related emissions, the air quality thresholds utilized herein applied to the proposed PMPU (see Table 4.2-22) are based on EPA's NSR program, which sets standards consistent with the NAAQS. However, existing models have limited sensitivity to small changes in criteria pollutant concentrations and, as such, translating project-generated criteria pollutants to specific health effects would not produce meaningful information, as project-related emissions are unlikely to show up in any regional model. In other words, increases in regional air pollution from project-generated ROG and NO_x would have no effect on specific human health outcomes that could be attributed to specific project emissions. Other criteria pollutant emissions, including CO, PM₁₀, and PM_{2.5}, generally affect air quality on a localized scale.

Health effects related to localized pollutants are the product of localized sources and emissions generated by numerous sources throughout a region. Certain air quality models, particularly dispersion models, could translate project-generated localized pollutants to specific localized health effects, such as nearby exposure to DPM, but these models have limited ability to translate project-generated pollutants to specific regional health effects.

As shown in Tables 4.2-17 through 4.2-24, construction and operation of the proposed PMPU would result in emissions of criteria air pollutants that would be above significance thresholds before mitigation. Because the SDAPCD- and County-recommended thresholds (see Table 4.2-16) serve as health-based thresholds for ROG and NO_x, construction and operation of future development under the proposed PMPU may result in adverse health effects (e.g., respiratory issues) associated with criteria pollutant emissions.

Moreover, construction and operation of future development under the proposed PMPU would not result in adverse health effects on the nearby populations associated with localized PM exhaust, as implementation of the proposed project would result in emissions of localized pollutants (PM₁₀ and PM_{2.5}) far below thresholds. However, the operation of the future development allowed under the proposed PMPU may result in adverse health effects (e.g., fatigue, headaches, confusion, dizziness, and chest pain) on the nearby populations associated with localized CO, due solely to CO emissions from fuel combustion in recreational boats, motor vehicles, natural gas combustion, and commercial fishing vessels, as implementation of the future development would result in emissions of CO above thresholds. Consequently, the health-related impacts of the localized criteria air pollutant emissions generated during the construction (**Impact-AQ-4**) and operation (**Impact-AQ-5**) of future development are considered significant.

Mitigation measures **MM-AQ-2** through **MM-AQ-8** are proposed to reduce emissions of all criteria pollutants as well as DPM during construction (**Impact-AQ-4**). Mitigation measures **MM-AQ-9** through **MM-AQ-12** are proposed to reduce emissions of all criteria pollutants as well as DPM during operations (**Impact-AQ-5**).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction and operational impacts related to exposing nearby sensitive receptors to pollutant concentrations (**Impact-AQ-4** and **Impact-AQ-5**). These significant impacts would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 1 would include the same water and land uses for PD3 analyzed above. Operations that would occur for Option 1 would fall within the range of scenarios analyzed above. Option 1 would not include new uses that generate substantial emissions, and Option 1 would not change the operational assumptions analyzed above. Pollutant emissions associated with reconfiguring and closing of North Harbor Drive, construction of a Waterfront Destination Park, and other improvements to open space would be similar to those in the analysis above but could place sensitive recreational (park) receptors in different locations within PD3. This option would not change the location of residential uses adjacent to PD3. Potential operational impacts associated with Option 1 are significant (**Impact-AQ-5**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction and operational impacts related to exposing nearby sensitive receptors to pollutant concentrations (**Impact-AQ-4** and **Impact-AQ-5**). These significant impacts would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would include the same water and land uses for PD3 analyzed above. Operations that would occur for Option 2 would fall within the range of scenarios analyzed above. Option 2 would not include new uses that generate substantial emissions, and Option 2 would not change the operational assumptions analyzed above. Pollutant emissions associated with additional Recreation Open Space and the expansion of the Lane Field Setback Park would be similar to the analysis above but could place sensitive recreational (park) receptors in different locations within PD3. This option would not change the location of residential uses adjacent to PD3. Potential operational impacts associated with Option 2 are significant (**Impact-AQ-5**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction and operational impacts related to exposing nearby sensitive receptors to pollutant concentrations (**Impact-AQ-4** and **Impact-AQ-5**). These significant impacts would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would include the same water and land uses for PD3 analyzed above. Operations that would occur for Option 3 would fall within the range of scenarios analyzed above. Option 3 would not include new uses that generate substantial emissions, and Option 3 would not change the operational assumptions analyzed above. Pollutant emissions associated with realignment of North Harbor Drive and the additional recreational open space would be similar to the analysis above but could place sensitive recreational (park) receptors in different locations within PD3. This option would not change the location of residential uses adjacent to PD3. Potential operational impacts associated with Option 3 are significant (**Impact-AQ-5**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to exposure of sensitive receptors to substantial pollutant concentrations. Rather, the proposed PMPU policies listed in Section 4.2.4.3 would reduce potential impacts related to exposure of sensitive receptors to substantial pollutant concentrations by implementing programs and activities that reduce toxic air contaminants (ECO Policy 3.1.1); working to reduce the cumulative health burdens on neighboring communities, especially disadvantaged communities (EJ Policy 3.1.1); and collaborating with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in Portside Communities (EJ Policy 3.1.2). Moreover, other improvements to reduce emissions from all sources at the waterfront (ECO Policy 3.1.2, ECO Policy 3.1.3, ECO Policy 3.1.4, ECON Policy 2.3.2, SR Policy 3.1.2) would act to reduce exposure of sensitive receptors to substantial pollutant concentrations.

Impact Determination and Mitigation

Implementation of future development allowed under the proposed PMPU would expose sensitive receptors to substantial pollutant concentrations.

Significant Impacts

Impact-AQ-4: Health Effects During PMPU Buildout Construction from ROG and NO_x

Emissions. Project-related emissions during construction could contribute a significant level of air pollution from ROG and NO_x within the SDAB. Specific construction details (such as timing, phasing, and overlapping of possible construction projects implemented over the life of the proposed PMPU) are not known at this time and emissions could exceed relevant thresholds that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.

Impact-AQ-5: Health Effects During PMPU Buildout Operations from ROG, NO_x, and CO.

Project-related emissions during operations could contribute a significant level of air pollution from ROG, NO_x, and CO within the SDAB. Implementation of the proposed PMPU could exceed relevant thresholds that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.

Mitigation Measures

For Impact-AQ-4:

Implement **MM-AQ-2** through **MM-AQ-8**, as described under Threshold 2.

For Impact-AQ-5:

Implement **MM-AQ-9** through **MM-AQ-12**, as described under Threshold 2.

Level of Significance After Mitigation

Impact-AQ-4 would be reduced to less than significant after implementation of **MM-AQ-2** through **MM-AQ-8**. While the proposed timing, intensity, and duration of the construction of future development allowed under the proposed PMPU are not yet known, proposed mitigation would ensure that emissions during construction would be reduced to a level below thresholds that were adopted for the purpose protecting of public health. **Impact-AQ-4** would be considered less than significant following mitigation.

Impact-AQ-5 would remain significant after implementation of **MM-AQ-9** through **MM-AQ-12**. Mitigation would reduce emissions, but at full buildout, emissions could remain in excess of thresholds that were adopted for the purpose protecting of public health. **Impact-AQ-5** would be considered significant and unavoidable.

Threshold 4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact Analysis**Impacts of Water and Land Uses**

Although other emission types, such as odors, rarely cause any physical harm, they can be unpleasant and affect certain members of the public. These effects include distress that may often generate citizen complaints to local governments and air districts. Any project with the potential to frequently expose the public to emissions, such as odors, would be deemed as having a significant impact.

According to CARB's *Air Quality and Land Use Handbook*, land uses associated with odor complaints typically include sewage treatment plants, landfills, recycling facilities, and manufacturing (CARB 2005a). Odor impacts on residential areas and other sensitive receptors, such as hospitals, daycare centers, and schools, warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, work sites, and commercial areas.

The proposed PMPU would not authorize the development of any of the land uses associated with odor complaints. Potential odor emitters during construction activities could include diesel exhaust, asphalt paving, and architectural coatings. However, construction-related activities near existing receptors would be temporary in nature, and construction activities would not result in nuisance odors that would violate SDAPCD Rule 51. Potential odor emitters during operations would include exhaust from motor vehicles, offroad equipment, and vessel activity. However, odor impacts would be limited to the circulation routes, parking areas, and areas immediately adjacent to activities that produce emissions (such as construction, motor vehicles, vessels). Although such brief exhaust odors may be considered adverse, they would not affect a substantial number of people, and any odor-related impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to odors. Option 1 would include the same water and land uses for PD3 analyzed above. The types of construction that would occur for Option 1 would fall within the range of scenarios analyzed above. Option 1 would not include substantial building replacement, demolition, or construction, or waterside improvements that would require substantial equipment usage beyond what was assumed above. Odor-related impacts associated with reconfiguring and closing of North Harbor Drive, construction of a Waterfront Destination Park, and other improvements to open space would be similar to those in the analysis above. Option 1 would not include development of any of the land uses associated with odor complaints. None of the proposed changes would introduce new odor emitters, and all construction would abide by SDAPCD Rule 51. Similarly, any odor impacts would be limited to the circulation routes, parking areas, and areas immediately adjacent to activities that produce emissions (such as construction, motor vehicles, vessels). While such brief exhaust odors may be considered adverse, they would not affect a substantial number of people, and any odor-related impacts would be less than significant. Therefore, impacts related to Option 1 would be less than significant, and implementation of Option 1 would not result in any additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to odors. Option 2 would include the same water and land uses for PD3 analyzed above. The types of construction that would occur for Option 2 would fall within the range of scenarios analyzed above. Option 2 would not include substantial building replacement, demolition, or construction, or waterside improvements that would require substantial equipment usage beyond what was assumed above. Option 2 would not include development of any of the land uses associated with odor complaints. None of the

proposed changes would introduce new odor emitters, and all construction would abide by SDAPCD Rule 51. Similarly, any odor impacts would be limited to the circulation routes, parking areas, and areas immediately adjacent to activities that produce emissions (such as construction, motor vehicles, vessels). While such brief exhaust odors may be considered adverse, they would not affect a substantial number of people, and any odor-related impacts would be less than significant. Therefore, impacts related to Option 2 would be less than significant, and implementation of Option 2 would not result in any additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to odors. Option 3 would include the same water and land uses for PD3 analyzed above. The types of construction that would occur for Option 3 would fall within the range of scenarios analyzed above. Option 3 would not include substantial building replacement, demolition, or construction, or waterside improvements that would require substantial equipment usage beyond what was assumed above. Option 3 would not include development of any of the land uses associated with odor complaints. None of the proposed changes would introduce new odor emitters and all construction would abide by SDAPCD Rule 51. Similarly, any odor impacts would be limited to the circulation routes, parking areas, and areas immediately adjacent to activities that produce emissions (such as construction, motor vehicles, vessels). While such brief exhaust odors may be considered adverse, they would not affect a substantial number of people, and any odor-related impacts would be less than significant. Therefore, impacts related to Option 3 would be less than significant, and implementation of Option 3 would not result in any additional or more severe impact than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to emissions (such as those leading to odors) adversely affecting a substantial number of people. Rather, the proposed PMPU policies listed in Section 4.2.4.3 would reduce potential impacts related emissions (such as those leading to odors) adversely affecting a substantial number of people by implementing programs and activities that reduce all emissions (ECO Policy 3.1.1) and collaborating with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in Portside Communities (EJ Policy 3.1.2). Proposed PMPU policies that would reduce emissions, and community exposure to DPM and emissions would reduce potential impacts related to emissions (such as those leading to odors) adversely affecting a substantial number of people.

Impact Determination and Mitigation

Implementation of future development allowed under the proposed PMPU, as well as with inclusion of Options 1, 2 and 3, would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people.

4.2.5 Cumulative Impact Analysis

Potential cumulative air quality impacts would result when cumulative projects' pollutant emissions would combine to degrade air quality conditions to below acceptable levels. This could occur on a local level, such as through increases in vehicle emissions at congested intersections, or at sensitive receptor locations due to concurrent construction activities; at a regional level, such as the potential impact of multiple past, present, and probable future projects on O₃ within the SDAB; or globally, such as the potential impact of GHG emissions on global climate change (see Section 4.6).

The County of San Diego thresholds for cumulative air quality impacts are utilized for the analysis of the impacts of construction and operations of development under the proposed PMPU.

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously constructed. The following thresholds are used to determine the cumulatively considerable net increase in emissions during the construction phase.

- A project that has a significant direct impact on air quality with regard to emissions of PM₁₀, PM_{2.5}, NO_x, and/or VOCs (i.e., an exceedance of values indicated in Table 4.2-16) would also have a cumulatively considerable net increase.
- In the event that direct impacts from a project are less than significant, a project may still make a cumulatively considerable contribution to a cumulative impact on air quality if the emissions of concern from the project, in combination with the emissions of concern from other probable future projects within the proximity relevant to the pollutants of concern, are in excess of direct air quality impact thresholds.

The following thresholds are used to determine the cumulatively considerable net increase in emissions during the operation phase.

- A project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of PM₁₀, PM_{2.5}, NO_x, and/or VOCs (i.e., an exceedance of values indicated in Table 4.2-16) would also have a significant cumulatively considerable net increase.
- Projects that generate CO concentrations in excess of the health-based NAAQS and CAAQS would result in a cumulatively considerable net increase in CO concentrations.
- A project would result in a significant direct impact on health risk by resulting in incremental risk greater than 10 in 1 million for cancer or hazard index greater than 1.0 for chronic and acute non-cancer health would also have a significant cumulatively considerable net increase in health risk.

4.2.5.1 Geographic Scope

The SDAB, which covers 4,260 square miles of Southern California and is contiguous with San Diego County, represents the cumulative geographic scope for air quality impacts related to consistency with air quality plans and air quality threshold levels because plans and thresholds are established at the air basin-wide level to attain air quality standards that are assigned for the entire air basin, which in this case is the entire county. Cumulative impacts on sensitive receptors and odors are considered at a more localized level due to the more limited area of dispersion, and include the

surrounding neighborhoods and areas close to the source of the emission and odor sources, respectively.

4.2.5.2 Cumulative Effects From Past, Present, and Probable Future Projects

Air quality has improved for a number of criteria pollutants over the previous decades despite increases in population and associated vehicle trips. San Diego County has come into attainment for several criteria pollutants despite more stringent standards and population increases. The county is currently designated as an attainment area for CO, NO₂, Pb, SO₂, and sulfates. The SDAB has not violated the annual NAAQS for NO₂ since 1978 and has not violated the 1-hour CAAQS for NO₂ since 1988; it has never recorded violations of the SO₂ standard. Federal standards for Pb have not been exceeded since 1980, and State standards for Pb have not been exceeded since 1987. The SDAB was once a nonattainment area for CO, but has not violated the CO standard since 1990.

Past projects within the SDAB have involved the emissions of ozone precursors (ROG or VOC and NO_x), PM₁₀, and PM_{2.5}, resulting in nonattainment status for 8-hour ozone under the NAAQS and nonattainment status for ozone, PM₁₀, and PM_{2.5} under the CAAQS. Therefore, the emissions of concern within the SDAB are ozone precursors (ROG and NO_x), PM₁₀, and PM_{2.5}.

The nonattainment status for the entire county is a consequence of past and present projects, plans, and programs, and is subject to continued nonattainment status by the cumulative contribution of probable future projects, plans, and programs within the county, including growth projected by SANDAG as well as those additional plans and programs shown in Table 2-2 of Chapter 2, *Environmental Setting*. Each of these plans and programs would potentially make a cumulatively considerable contribution to the nonattainment status of regional and local air quality conditions.

Localized air quality conditions are influenced by a variety of sources, and guidance from several lead agencies, including the Bay Area Air Quality Management District (2017) and CARB (2005), which recommend analyzing the localized effects of emissions from sources within 1,000 feet of proposed new emission sources or proposed new receptor locations. All of the present and probable future projects implemented by SANDAG and those plans and programs listed in Table 2-2 could result in construction and operational emissions that could contribute to cumulative impacts on local and regional air quality.

Construction of one or more of these plans and programs would potentially overlap with the construction of PMPU-related uses, which would occur intermittently through the 2050 timeframe. Specifically, the cumulative plans and programs that would potentially make a cumulatively considerable contribution of air emissions include the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component FEIR (TAMT EIR, December 2016) and the B Street Cruise Ship Terminal Interior Improvements by Port of San Diego at B Street Pier.

The TAMT EIR proposes a variety of infrastructure investments to be undertaken over the long-term in order to increase the terminal's capabilities and capacity. The increase in cargo throughput would increase activity from emissions sources, such as OGVs, harbor craft, trucks, and terminal equipment, and includes a variety of mitigation measures to reduce emissions over the life of the Redevelopment Plan. Construction of the various investments will occur sporadically through 2035.

Additionally, while the B Street Cruise Ship Terminal Interior Improvements by Port of San Diego at B Street Pier project would involve interior improvements at the existing cruise ship terminal, the project would not result in an increase in cruise ship calls or related activity associated with the operation of the cruise ship terminal. Construction of the B Street Cruise Ship Terminal Interior Improvements by Port of San Diego at B Street Pier project is expected to occur in 2023 and last approximately 12 months.

However, because past and present projects have resulted in the current nonattainment status for ozone (ROG and NO_x), PM10, and PM2.5, and probable future plans and programs would continue to contribute to the nonattainment status and potentially affect sensitive receptors, impacts related to the cumulative contribution of nonattainment pollutants (ozone precursors, PM10, and PM2.5) and the exposure of sensitive receptors to substantial pollutant concentrations would be considered cumulatively significant.

4.2.5.3 Project Contribution

As discussed under Threshold 1 above, the proposed PMPU introduces numerous changes in water and land uses that would increase development within the PMPU area. As such, the proposed PMPU would change land use designations that were previously considered in the PMP and subsequently in the RAQS and SIP. The RAQS and SIP are designed to bring the SDAB into attainment with the State and Federal ozone standards. As the proposed new uses were not originally anticipated in the growth projections for the RAQS and SIP inventories, buildout associated with the proposed PMPU could exceed that estimated for the existing PMP (**Impact-C-AQ-1**).

Implementation of **MM-AQ-1** will ultimately ensure that the proposed PMPU is consistent with the RAQS and SIP. Thus, with mitigation, the project would not result in a cumulatively considerable contribution to a significant cumulative impact with respect to consistency with air quality plans following mitigation.

As discussed under Threshold 2, while the timing, location, and intensity of individual construction projects are not known, emissions modeling demonstrates that construction emissions could potentially exceed thresholds during concurrent construction activity (**Impact-C-AQ-2**). With **MM-AQ-2** through **MM-AQ-8**, construction-related emissions would be reduced below thresholds. Accordingly, with mitigation, the proposed project's incremental contribution from construction emissions would be less than cumulatively considerable following mitigation.

Also, as discussed under Threshold 2, operations-related emissions associated with the full PMPU buildout would be above threshold levels for ROG and CO before mitigation (**Impact-C-AQ-3**). With implementation of mitigation measures **MM-AQ-9** through **MM-AQ-12**, operations-related emissions would remain above all threshold levels. Accordingly, the proposed PMPU's incremental contribution from operational emissions would be cumulatively considerable even after the implementation of all feasible mitigation.

As discussed under Threshold 3 above, construction of the proposed PMPU would not result in health risks at sensitive receptor locations in excess of incremental risk thresholds due to limited and dispersed nature of construction activities over the life of the proposed PMPU. Construction-related health risk would not be cumulatively considerable.

As also discussed under Threshold 3, operation of the proposed PMPU would not result in CO hot-spots at congested roadways within the proposed PMPU area. Background CO concentrations are

well below Federal and State standards, and the proposed PMPU's contribution, combined with background traffic volumes and emission concentrations, would be well below thresholds. Consequently, the proposed PMPU's incremental contribution to cumulative CO impacts would not be cumulatively considerable.

Also, as discussed under Threshold 3, construction of the proposed PMPU could result in emission exceedances that could contribute to adverse health effects (**Impact-C-AQ-4**). With implementation of **MM-AQ-2** through **MM-AQ-8**, construction-related emissions would be reduced to below threshold levels. Thus, with mitigation, the contribution to adverse health effects during construction would not be cumulatively considerable following mitigation. However, operation of the proposed PMPU would result in emission exceedances that could contribute to adverse health effects (**Impact-C-AQ-5**). With implementation of **MM-AQ-9** through **MM-AQ-12**, operation-related emissions would remain above all threshold levels. Accordingly, the proposed PMPU's incremental contribution towards adverse health effects would be cumulatively considerable even after the implementation of all feasible mitigation.

4.2.5.4 Cumulative Impact Determination and Mitigation

The proposed PMPU's incremental contribution to cumulative air quality and health risk impacts would be cumulatively considerable prior to mitigation. The potential cumulatively considerable impacts are as follows.

Impact-C-AQ-1. New Land Use Designations Not Accounted for in the RAQS and SIP. The proposed PMPU would redesignate various water and land uses that could increase activity within the Tidelands. These uses were not known at the time the RAQS and SIP were last updated, thus resulting in a conflict because the proposed land uses and the intensities proposed are not included in RAQS and SIP growth projections.

Impact-C-AQ-2 Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Construction. The proposed PMPU emissions during construction activities, before mitigation, would result in a cumulatively considerable contribution to a significant cumulative impact with respect to a net increase in criteria pollutants for which the region is nonattainment under an applicable Federal or State ambient air quality standard.

Impact-C-AQ-3 Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Operations. The proposed PMPU emissions during operations, before mitigation, would result in a cumulatively considerable contribution to a significant cumulative impact with respect to a net increase in criteria pollutants for which the region is nonattainment under an applicable Federal or State ambient air quality standard.

Impact-C-AQ-4 Health Effects During PMPU Buildout Construction from ROG and NO_x Emissions. The proposed PMPU emissions during construction activities, before mitigation, could contribute a cumulatively significant level of air pollution by exceeding relevant thresholds that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.

Impact-C-AQ-5 Health Effects During PMPU Buildout Operations from ROG, NO_x, and CO. The proposed PMPU emissions during operational activities, before mitigation, could contribute a cumulatively significant level of air pollution by exceeding relevant thresholds that have been

set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.

Mitigation Measures

For **Impact-C-AQ-1**:

Implement **MM-AQ-1**, as described under Threshold 1 above.

For **Impact-C-AQ-2**:

Implement **MM-AQ-2** through **MM-AQ-8**, as described under Threshold 2 above.

For **Impact-C-AQ-3**:

Implement **MM-AQ-9** through **MM-AQ-12**, as described under Threshold 2 above.

For **Impact-C-AQ-4**:

Implement **MM-AQ-2** through **MM-AQ-8**, as described under Threshold 2 above.

For **Impact-C-AQ-5**:

Implement **MM-AQ-9** through **MM-AQ-12**, as described under Threshold 2 above.

Level of Significance After Mitigation

With implementation of **MM-AQ-1**, the proposed project's inconsistency with the RAQS and SIP (**Impact-C-AQ-1**) would be rectified and would be less than cumulatively considerable. With implementation of **MM-AQ-2** through **MM-AQ-8**, the proposed project's contribution to cumulative air quality exceedances (**Impact-C-AQ-2**) and regional health effects (**Impact-C-AQ-4**) during construction would be reduced to a level considered less than cumulatively considerable. However, while implementation of **MM-AQ-9** through **MM-AQ-12** would reduce the proposed project's contribution to cumulative air quality exceedances (**Impact-C-AQ-3**) and regional health effects (**Impact-C-AQ-5**) during operations, the proposed project's contribution to regional health effects associated with criteria pollutants would remain cumulatively considerable.

4.3.1 Overview

This section describes the existing conditions and laws and regulations for biological resources, and analyzes the proposed Port Master Plan Update’s (PMPU’s) potential to: (1) have a substantial adverse effect, either directly or through habitat modifications, on any candidate, sensitive, or special-status species; (2) have a substantial adverse effect on any riparian habitat or other sensitive natural community; (3) have a substantial adverse effect on State or Federally protected wetlands through direct removal, filling, hydrological interruption, or other means; (4) substantially interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; and (5) conflict with applicable local policies or ordinances protecting biological resources or with the provisions of an applicable adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Terrestrial biology and marine biology analyses were conducted for the proposed PMPU. The terrestrial biology analysis was conducted by ICF and included a desktop review of available databases and reconnaissance survey. The results of the terrestrial biology desktop review and survey are incorporated into this section by reference. In addition, Marine Taxonomic Services performed desktop review of available databases and information to identify marine resources within the proposed PMPU area, the results of which are summarized in this section.

Table 4.3-1 summarizes the significant impacts and mitigation measures (MMs) discussed in detail in Section 4.3.4.4, *Project Impacts and Mitigation Measures*.

Table 4.3-1. Summary of Significant Biological Resources Impacts and Mitigation Measures

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-BIO-1: In-Water Construction-Induced Noise Impacts Disrupting Foraging Behavior of Sensitive Avian Species Such as California Least Tern and California Brown Pelican	All planning districts	MM-BIO-1: Implement Construction Measures to Avoid or Reduce Noise Impacts on California Least Tern and Other Sensitive Fish Foraging Avian Species	Less than Significant	MM-BIO-1 would require evaluation of construction noise and location relative to sensitive avian species by a qualified biologist. If noise cannot be reduced to remove the potential for impacts, construction monitoring during the nesting season by a qualified biological monitor is required.

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-BIO-2: Construction Noise Impacts on Nesting Behavior of Marine-Dependent Species Protected Under the Migratory Bird Treaty Act and California Fish and Game Code	All planning districts	MM-BIO-2: Implement Construction Noise Measures to Avoid or Reduce Noise Impacts on Sensitive Nesting Marine-Dependent Avian Species	Less than Significant	The monitor will have the ability to reduce or temporarily stop noise-producing activities if those activities are assessed to disrupt foraging by California least tern or other protected piscivorous species such as brown pelican. Impact-BIO-1 would be reduced to less than significant. MM-BIO-2 would require preconstruction nest surveys, nest monitoring, sound and visual barriers, and avoidance if nests are detected within 500 feet of a construction site to avoid significant impacts on nesting birds.
Impact-BIO-3: In-Water Pile Driving Activity Could Generate Noise Levels that Could Injure (Level A Harassment) or Alter the Behavior of (Level B Harassment) Marine Mammals, Green Sea Turtles, and Fishes	All planning districts	MM-BIO-3: Implement a Marine Mammal, Green Sea Turtle, and Fishes Monitoring Program During Pile Installation Activities.	Less than Significant	MM-BIO-3 would reduce impacts from pile-driving by halting in-water pile driving activities until species have left the construction area.
Impact-BIO-4: Increased Water Turbidity from Disturbance of Submerged Sediments During In-Water Construction Would Limit the Ability of Protected Fish-Foraging Avian Species to Locate Prey and	All planning districts	MM-BIO-4: Implement Construction Measures to Eliminate Water Quality Impairment Impacts on California Least Tern, Other Sensitive Fish Foraging Avian Species, and Eelgrass.	Less than Significant	MM-BIO-4 would implement training and construction BMP measures to avoid impacts related to water quality. Construction measures included in MM-WQ-1, MM-WQ-2, and MM-WQ-3 would reduce water quality

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Could Disrupt Eelgrass Productivity		Implement the following mitigation measures, as described in Section 4.8, <i>Hydrology and Water Quality</i> : MM-WQ-1 , Monitoring Turbidity and Constituents of Concern During Construction-Related Sediment Disturbance MM-WQ-2 : Implement Best Management Practices During Construction-Related Sediment Disturbance MM-WQ-3 : Apply Silt Curtains During Construction-Related Sediment Disturbance.		impacts to less than significant.
Impact-BIO-5: Potential Disturbance or Destruction of Nests Protected by the ESA and/or CESA, Migratory Bird Treaty Act, and California Fish and Game Code	All planning districts	MM-BIO-5: Avoid Nesting Season for Birds or Conduct Preconstruction Nest Surveys	Less than Significant	MM-BIO-5 would require that all vegetation removal, demolition, and construction would occur outside of nesting season (February 15 to August 31) or if not feasible additional performance standards would apply, avoiding the potential of a significant impact.
Impact-BIO-6: Aquaculture-Raised Shellfish Could Impact Essential Fish Habitat Through Reduction of Available Plankton and Organic Particles and Changes to the Benthic Environment	All planning districts	MM-BIO-6: Develop a Shellfish Aquaculture Mitigation Program in Coordination with the Appropriate Resource Agencies and the District to Minimize the Potential for Degraded Essential Fish Habitat and	Less than Significant	MM-BIO-6 would require future project proponents to develop a Shellfish Aquaculture Mitigation Program to address managed species. Impacts would be reduced to less than significant.

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
		Potential Benthic Impacts		
Impact-BIO-7: Permanent and Long-Term Overwater Coverage from Introduction of New Structures	All planning districts	MM-BIO-7: Implement Overwater Coverage Mitigation in Coordination with the Appropriate Resource Agencies and the District to Compensate for Loss of Open Water Habitat	Less than Significant	MM-BIO-7 would require consultation with the appropriate resource agencies to ensure the specified mitigation, which could be equal to or greater than specified in MM-BIO-7 , would reduce project-related impacts to less than significant.
Impact-BIO-8: Raptors and Other Large Predatory Birds Using Newly Constructed Structures as Perches to Hunt Protected Avian Species in Their Nesting Habitats	All planning districts	MM-BIO-8: Implement Raptor Perching Deterrent Measures on New Structures	Less than Significant	MM-BIO-8 would require installation of features to minimize the use of new structures as buildings, and pilings by avian predators. Impacts would be reduced to less-than-significant levels on new future buildings constructed.
Impact-BIO-9: Bird Strikes Resulting from Use of Reflective Materials	All planning districts	MM-BIO-9: Implement Bird Strike Reduction Measures on New Structures	Less than Significant	MM-BIO-9 would reduce bird strikes by requiring design that incorporates <i>Bird-Friendly Building Design</i> and would be approved by the District.
Impact-BIO-10: Temporary Water Quality and Sedimentation Impacts on Eelgrass Beds During Project Construction	All planning districts	MM-BIO-10: Implement Eelgrass Mitigation and Monitoring in Compliance with the California Eelgrass Mitigation Policy MM-BIO-4	Less than Significant	MM-BIO-10 surveys would confirm if any eelgrass impacts occurred, if so, then mitigation would be implemented to reduce impacts to less than significant.
Impact-BIO-11: Permanent Overwater Shading of Eelgrass Beds by Newly Constructed Structures	All planning districts	MM-BIO-10	Less than Significant	MM-BIO-10 would mitigate for the loss of eelgrass by meeting specific performance standards specified in

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
				MM-BIO-10. Impacts would be less than significant.
Impact-BIO-12: Direct Loss of Eelgrass from Dredging Activities	All planning districts	MM-BIO-10	Less than Significant	MM-BIO-10 would mitigate for the loss of eelgrass by meeting specific performance standards specified in MM-BIO-10 . Impacts would be less than significant.
Impact-BIO-13: Permanent Alteration of Bay Water Hydrodynamics due to the Placement of Pile Clusters	All planning districts	MM-BIO-11: Implement Measures that Improve Water Quality, Enhance Habitat, Restore Habitat, or Purchase Credits in a Mitigation Bank	Less than Significant	MM-BIO-11 would require mitigation to improve water quality, enhance habitat, restore habitat, or provide funds to a mitigation bank. Impacts would be reduced to less than significant.
Impact-BIO-14: Reduction in the Ecological Value of Benthic Communities from Increased Depths Created by Dredging Activities	All planning districts	MM-BIO-10 and MM-BIO-11	Less than Significant	MM-BIO-10 and MM-BIO-11 would ensure the ecological value of benthic communities are not adversely impacted either through onsite mitigation specified in MM-BIO-10 or through offsite requirements set by MM-BIO-11 .
Impact-BIO-15 Potential for Future Projects to Result in a Conflict with the Integrated Natural Resources Management Plan	All planning districts	MM-BIO-1 through MM-BIO-11		MM-BIO-1 through MM-BIO-11 would reduce impacts on biological resources to reduce future conflict with the Integrated Natural Resources Management Plan. Impacts would be less than significant.
Impact-C-BIO-1: Cumulative Impacts of In-Water Construction-Induced Noise Impacts	All planning districts	Implement MM-BIO-1	Less than Cumulatively Significant	MM-BIO-1 would require evaluation of construction noise and location relative

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Disrupting Foraging Behavior of Sensitive Avian Species Such as California Least Tern and California Brown Pelican				to sensitive avian species by a qualified biologist. If noise cannot be reduced to remove the potential for impact, construction monitoring during the nesting season by a qualified biological monitor is required. The monitor will have the ability to reduce or temporarily stop noise producing activities if those activities are assessed to disrupt foraging by California least tern or other protected piscivorous species such as brown pelican. Impact-C-BIO-1 would be reduced to less than significant.
Impact-C-BIO-2: Cumulative Impacts of Construction Noise Impacts on Nesting Behavior of Marine-Dependent Species Protected Under the Migratory Bird Treaty Act and California Fish and Game Code	All planning districts	Implement MM-BIO-2	Less than Cumulatively Significant	MM-BIO-2 would require a preconstruction survey, monitoring, sound and visual barriers, and avoidance if nests that are detected within 500 feet of a construction site.
Impact-C-BIO-3: Cumulative In-Water Pile Driving Activity Could Generate Noise Levels that Could Injure (Level A Harassment) or Alter the Behavior of (Level B Harassment) Marine Mammals, Green Sea Turtles, and Fishes	All planning districts	Implement MM-BIO-3	Less than Cumulatively Significant	MM-BIO-3 would reduce impacts from pile-driving by halting in-water pile driving activities until species has left the construction area.

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-C-BIO-4: Cumulative Impacts of Increased Water Turbidity from Disturbance of Submerged Sediments During In-Water Construction Would Limit the Ability of Protected Fish-Foraging Avian Species to Locate Prey and Could Disrupt Eelgrass Productivity	All planning districts	MM-BIO-4	Less than Cumulatively Significant	MM-BIO-4 would implement training and construction BMP measures. Impacts would be reduced to less than significant.
Impact-C-BIO-5: Cumulative Impacts of Disturbance or Destruction of Nests Protected by the ESA and/or CESA, Migratory Bird Treaty Act, and California Fish and Game Code	All planning districts	MM-BIO-5	Less than Cumulatively Significant	MM-BIO-5 would require all vegetation removal, demolition, and construction would occur outside of nesting season (February 15 to August 31). If it is not feasible for activities to occur outside the nesting season, work may occur within the nesting season upon approval from the District, and suitable mitigation measures such as nesting bird surveys and no-disturbance buffers if nests are detected. Impacts would be reduced to less than significant.
Impact-C-BIO-6: Cumulative Impacts of Aquaculture-Raised Shellfish Could Impact Essential Fish Habitat through Reduction of Available Plankton and Organic Particles and Changes to the Benthic Environment	All planning districts	MM-BIO-6	Less than Cumulatively Significant	MM-BIO-6 would require future project proponents to develop a Shellfish Aquaculture Mitigation Program to address managed species. Impacts would be reduced to less than significant.

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-C-BIO-7: Cumulative Impacts of Permanent and Long-Term Overwater Coverage from Introduction of New Structures	All planning districts	MM-BIO-7	Less than Cumulatively Significant	MM-BIO-7 would require mitigation for increases in overwater coverage per the CWA. Impacts would be reduced to less-than-significant levels.
Impact-C-BIO-8: Cumulative Impacts of Raptors and Other Large Predatory Birds Using Newly Constructed Structures as Perches to Hunt Protected Avian Species in their Nesting Habitats	All planning districts	MM-BIO-8	Less than Cumulatively Significant	MM-BIO-8 would require installation of features to minimize the use of new structures such as buildings, and pilings by avian predators. Impacts would be reduced to less than significant on future buildings constructed.
Impact-C-BIO-9: Cumulative Impacts of Bird Strikes Resulting from Use of Reflective Materials	All planning districts	MM-BIO-9	Less than Cumulatively Significant	MM-BIO-9 would reduce bird strikes by requiring design that incorporates <i>Bird-Friendly Building Design</i> and approval by the District. Impacts would be reduced to less than significant.
Impact-C-BIO-10: Cumulative Impacts of Temporary Water Quality and Sedimentation Impacts on Eelgrass Beds During Project Construction	All planning districts	MM-BIO-4 and MM-BIO-10	Less than Cumulatively Significant	MM-BIO-4 would implement training and construction BMP measures. Impacts would be reduced to less than significant. MM-BIO-10 surveys would confirm if any eelgrass impacts occurred, if so, then mitigation would be implemented. Impacts would be less than significant.

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-C-BIO-11: Cumulative Impacts of Permanent Overwater Shading of Eelgrass Beds by Newly Constructed Structures	All planning districts	MM-BIO-4 and MM-BIO-10	Less than Cumulatively Significant	MM-BIO-4 would implement training and construction BMP measures. Impacts would be reduced to less than significant. MM-BIO-10 surveys would confirm if any eelgrass impacts occurred, if so, then mitigation would be implemented. Impacts would be less than significant.
Impact-C-BIO-12: Cumulative Impacts of Direct Loss of Eelgrass from Dredging Activities	All planning districts	MM-BIO-11	Less than Cumulatively Significant	
Impact-C-BIO-13: Cumulative Impacts of Permanent Alteration of Bay Water Hydrodynamics due to the Placement of Pile Clusters	All planning districts	MM-BIO-10 and MM-BIO-11	Less than Cumulatively Significant	MM-BIO-10 surveys would confirm if any eelgrass impacts occurred, if so, then mitigation would be implemented. Impacts would be less than significant. MM-BIO-11 would require mitigation to improve water quality, enhance habitat, restore habitat, or provide funds to a mitigation bank. Impacts would be reduced to less than significant.

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-C-BIO-14: Cumulative Impacts of Reduction in the Ecological Value of Benthic Communities from Increased Depths Created by Dredging Activities	All planning districts	Implement MM-BIO-10 and MM-BIO-11	Less than Cumulatively Significant	MM-BIO-11 would ensure the ecological value of benthic communities are not adversely impacted either through onsite mitigation specified in MM-BIO-10 or through offsite requirements set by MM-BIO-11 .
Impact-C- BIO-15: Cumulative Impacts of Future Projects to Result in a Conflict with the Integrated Natural Resources Management Plan	All planning districts	MM-BIO-1 through MM-BIO-11	Less than Cumulatively Significant	MM-BIO-1 through MM-BIO-11 would reduce impacts on biological resources to reduce future conflict with the Integrated Natural Resources Management Plan and San Diego Bay National Wildlife Refuge Comprehensive Conservation Plan. Impacts would be less than significant.

4.3.2 Existing Conditions

4.3.2.1 San Diego Bay Setting

The proposed PMPU area includes portions of the San Diego Bay within the following planning districts (PDs): PD1, PD2, PD3, PD4, a portion of PD7, and PD9 and PD10. San Diego Bay is a nearly enclosed, naturally formed embayment. The Bay was formed from the alluvial floodplains of the Otay, Sweetwater, and San Diego Rivers, and was historically shallow. The redirection and channelization of the San Diego River beginning in the 1940s along with multiple dredging and channel-deepening projects, which have resulted in deep waters in the northern and central portions of the Bay (with deepest waters of 59 feet occurring at the mouth of the Bay), transitioning to shallow waters (less than 3 feet) at the southern end of the Bay (U.S. Navy and District 2013). The San Diego Bay Integrated Natural Resources Management Plan (INRMP), jointly prepared by the U.S. Navy and the San Diego Unified Port District (District), divides the Bay into multiple habitat definitions based on depth including: deep subtidal (< -20 feet mean lower-low water [MLLW]), moderately deep subtidal (-12 to -20 feet MLLW), shallow subtidal (-2.2 to -12 feet MLLW), and intertidal (-2.2 to +7.8 feet MLLW) (Figures 4.3-1 through 4.3-8). Currently, deep subtidal and

moderately deep subtidal waters account for more than 50 percent of total Bay surface area (U.S. Navy 2013). In contrast, shallow subtidal habitat accounts for approximately 28 percent of Bay surface area, primarily in south San Diego Bay. Intertidal habitat currently accounts for only 7 percent of the Bay surface area.

The habitats of San Diego Bay are reflective of water depth and presence or absence of shoreline structures. More than 70 percent of the shoreline (45.4 miles out of a total 64.4 miles) of San Diego Bay is currently armored (U.S. Navy 2013). Armoring is primarily rock riprap, but also includes vertical bulkhead walls, boat launch ramps, earthen dikes, and wharves. Additionally, there are over 130 acres of surface structures (e.g., piers, docks) within the Bay that currently shade intertidal and subtidal waters. The majority of the lands in the northern and central portions of the Bay are developed with a mix of commercial, recreational, and military uses.

South San Diego Bay has less shoreline development relative to the northern and central portions of the Bay. As such, much of the shoreline is “soft” and composed of native sand and mud substrate. The common south Bay associated habitats include southern coastal salt marsh, intertidal, mudflats, salt flats, and southern coastal foredune, as shown on Figure 4.3-5 and 4.3-7.

The dominant vegetated subtidal habitat in San Diego Bay is common eelgrass (*Zostera marina*) (Merkel & Associates, Inc. 2014). The most recent baywide eelgrass survey, completed in 2020, found 2,598 acres of eelgrass (represented by two species, common eelgrass and Pacific eelgrass [*Zostera pacifica*]). This accounts for approximately 17 percent of the eelgrass present in California (NAVFACSW 2021). The majority of eelgrass present in San Diego Bay occurs in the southern portion of the Bay due to the predominantly shallow nature of the south Bay.

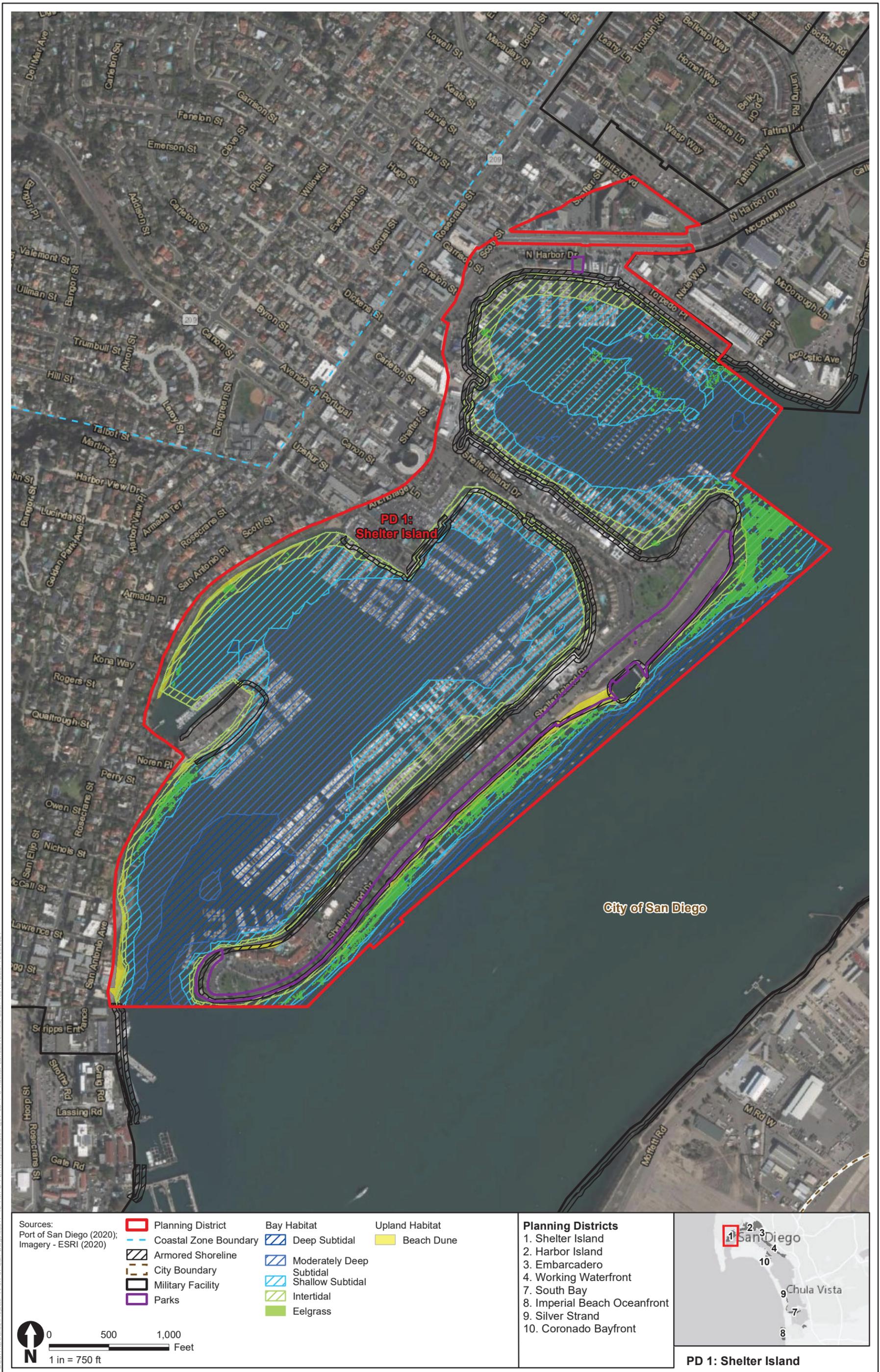
Salt marshes currently cover approximately 800 acres of the Bay, with most of this habitat composed of a network of marshes that form a non-contiguous patchwork in the south Bay, much of which is outside of, but adjacent to the proposed PMPU area (Figure 4.3-5). The marine habitats of San Diego Bay currently support several sensitive avian species, marine mammals, and reptiles. Habitats and sensitive species within the proposed PMPU area and its surroundings are described further below.

4.3.2.2 Coastal Imperial Beach Setting

The coastal Imperial Beach setting encompasses the beach and nearshore coastal waters (i.e., the Pacific Ocean) adjacent to and surrounding Imperial Beach Pier. Within this area, the open coastal shoreline consists of high usage sand beach from north to south and urban developed land to the west. (Figure 4.3-6). Approximately one half-mile to the south of the Pier-end and inland from the shore is the northern Oneonta Slough portion of the Tijuana River Estuary. This portion of the estuary is inland of a linear residential neighborhood along Seacoast Drive. The remaining environment away from the shoreline is urban developed lands.

A coastal environment supporting non-persistent kelp beds, sand, and cobble-bottom environments is offshore of the Imperial Beach Pier (Merkel & Associates, Inc. et al. 2004; Merkel & Associates, Inc. 2011b, SANDAG 2002). The majority of this offshore environment supports unvegetated soft-bottom habitat of a principally sandy nature. Cobble beds are present near the Imperial Beach Pier and are intermittently sanded over, unvegetated, or support poorly developed kelp canopy as described further in this section. In addition, the soft-bottom habitat in this area supports shell hash and gravel.

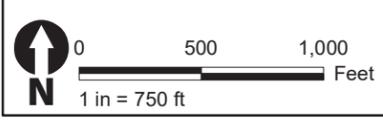
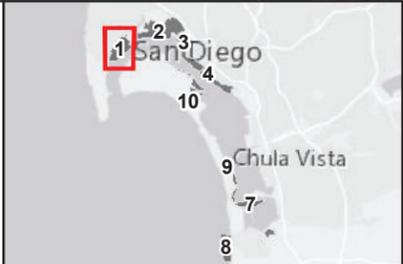
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Sources:
 Port of San Diego (2020);
 Imagery - ESRI (2020)

- | | | |
|-----------------------|--------------------------|----------------|
| Planning District | Bay Habitat | Upland Habitat |
| Coastal Zone Boundary | Deep Subtidal | Beach Dune |
| Armored Shoreline | Moderately Deep Subtidal | |
| City Boundary | Shallow Subtidal | |
| Military Facility | Intertidal | |
| Parks | Eelgrass | |

- Planning Districts**
1. Shelter Island
 2. Harbor Island
 3. Embarcadero
 4. Working Waterfront
 7. South Bay
 8. Imperial Beach Oceanfront
 9. Silver Strand
 10. Coronado Bayfront



PD 1: Shelter Island

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Figure 4.3-1
 Habitat and Land Cover Map
 Port Master Plan Update

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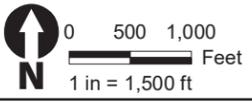
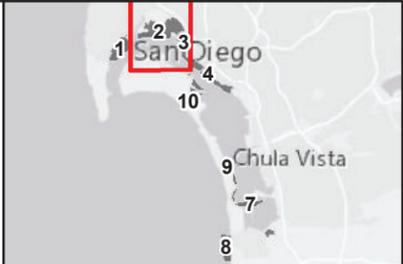


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Sources:
 Port of San Diego (2020);
 Imagery - ESRI (2020)

- | | | |
|--|--|--|
| Planning District | Bay Habitat | Upland Habitat |
| Coastal Zone Boundary | Deep Subtidal | Beach Dune |
| Armored Shoreline | Moderately Deep Subtidal | |
| City Boundary | Shallow Subtidal | |
| Military Facility | Intertidal | |
| Parks | Eelgrass | |

- Planning Districts**
1. Shelter Island
 2. Harbor Island
 3. Embarcadero
 4. Working Waterfront
 7. South Bay
 8. Imperial Beach Oceanfront
 9. Silver Strand
 10. Coronado Bayfront

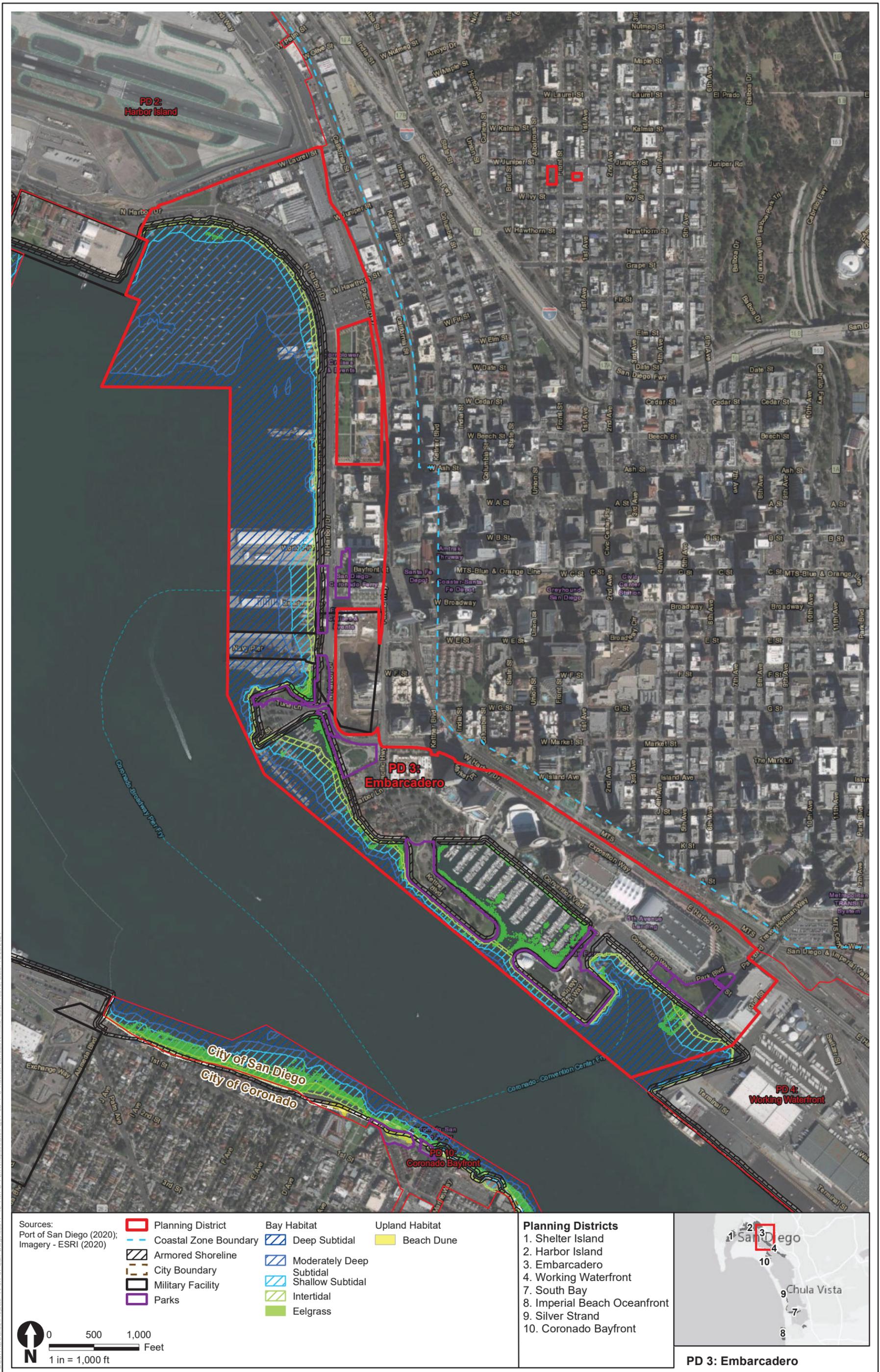


PD 2: Harbor Island



Figure 4.3-2
 Habitat and Land Cover Map
 Port Master Plan Update

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Figure 4.3-3
 Habitat and Land Cover Map
 Port Master Plan Update

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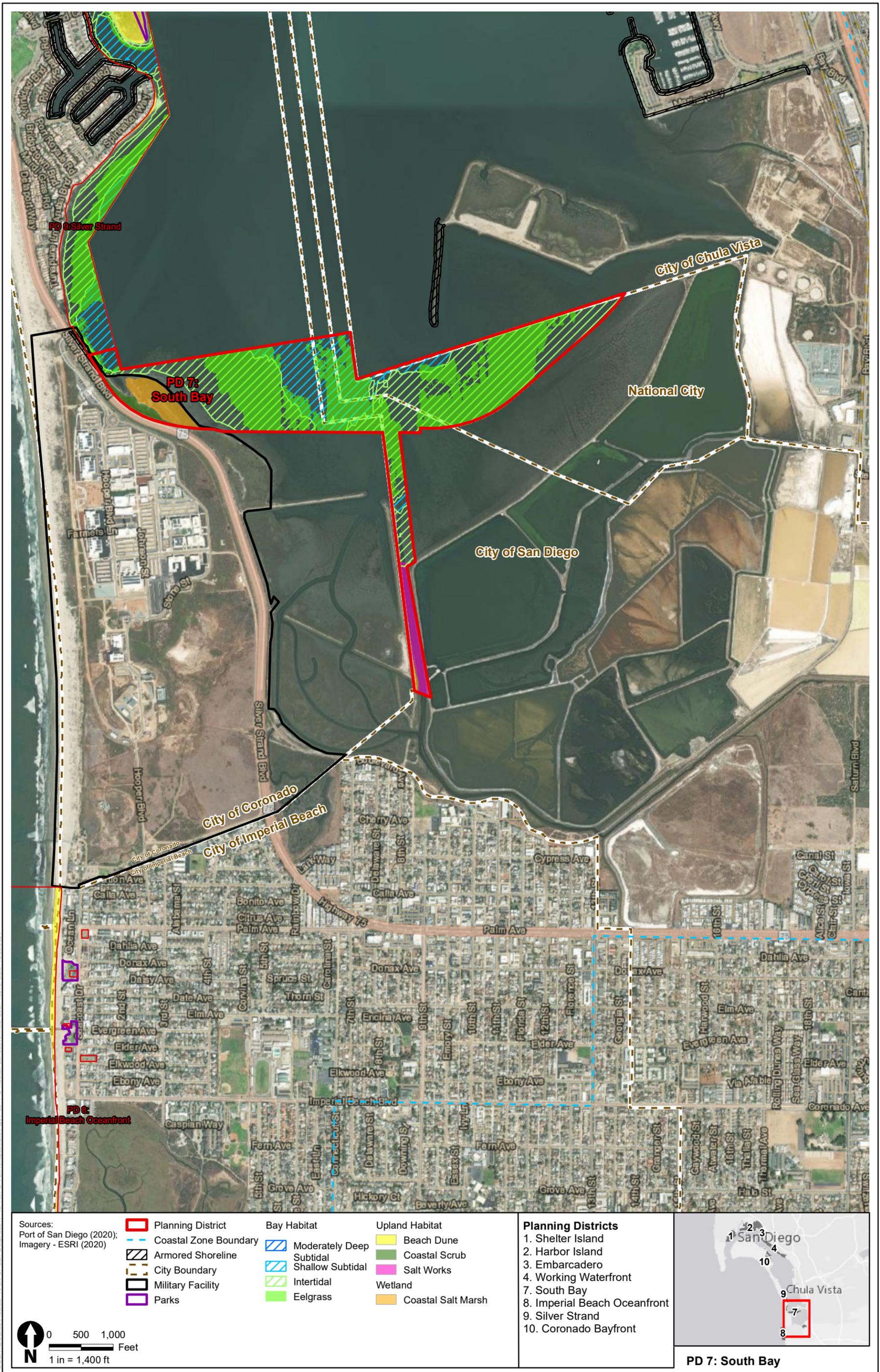


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Figure 4.3-4
 Habitat and Land Cover Map
 Port Master Plan Update

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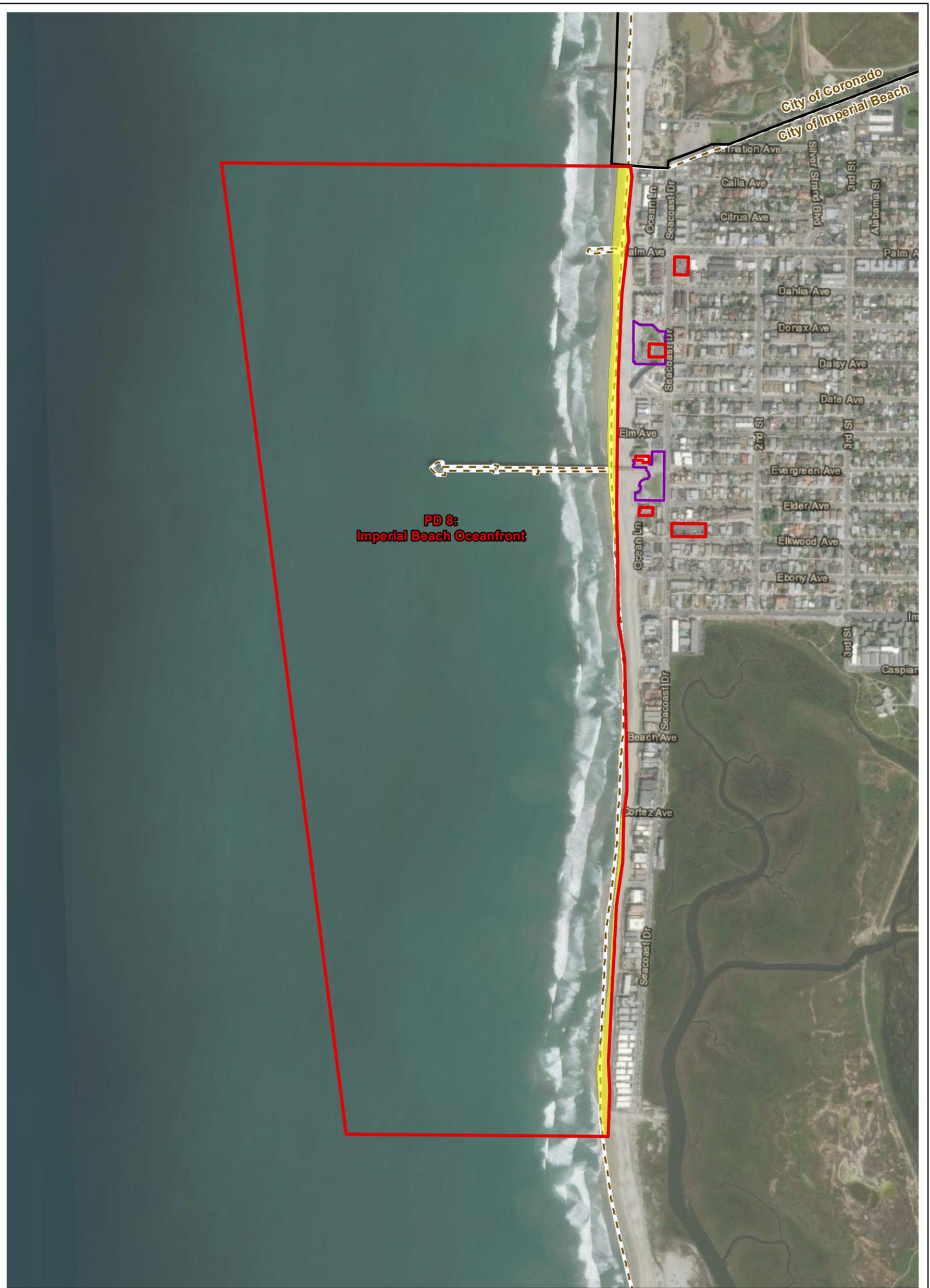
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Figure 4.3-5
 Habitat and Land Cover Map
 Port Master Plan Update

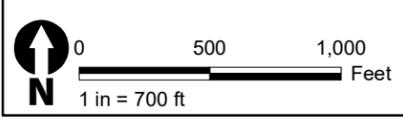
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Sources:
 Port of San Diego (2020);
 Imagery - ESRI (2020)

- Planning District
- City Boundary
- Military Facility
- Parks
- Beach Dune
- Upland Habitat



- Planning Districts**
1. Shelter Island
 2. Harbor Island
 3. Embarcadero
 4. Working Waterfront
 7. South Bay
 8. Imperial Beach Oceanfront
 9. Silver Strand
 10. Coronado Bayfront



PD 8: Imperial Beach Oceanfront



Figure 4.3-6
Habitat and Land Cover Map
Port Master Plan Update

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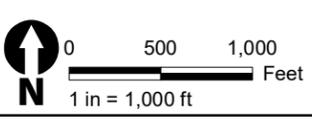
Sources:
Port of San Diego (2020);
Imagery - ESRI (2020)

- Planning District
- Armored Shoreline
- City Boundary
- Military Facility
- Parks

- Bay Habitat**
- Moderately Deep Subtidal
 - Shallow Subtidal
 - Intertidal
 - Eelgrass

- Upland Habitat**
- Beach Dune
 - Coastal Scrub
 - Wetland
 - Coastal Salt Marsh

- Planning Districts**
1. Shelter Island
 2. Harbor Island
 3. Embarcadero
 4. Working Waterfront
 7. South Bay
 8. Imperial Beach Oceanfront
 9. Silver Strand
 10. Coronado Bayfront



PD 9: Silver Strand

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Figure 4.3-7
Habitat and Land Cover Map
Port Master Plan Update

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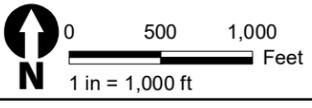
Sources:
 Port of San Diego (2020);
 Imagery - ESRI (2020)

- Planning District
- Coastal Zone Boundary
- Armored Shoreline
- City Boundary
- Military Facility
- Parks

- Bay Habitat
- Deep Subtidal
- Moderately Deep Subtidal
- Shallow Subtidal
- Intertidal
- Eelgrass

- Upland Habitat
- Beach Dune
- Coastal Scrub

- Planning Districts**
1. Shelter Island
 2. Harbor Island
 3. Embarcadero
 4. Working Waterfront
 7. South Bay
 8. Imperial Beach Oceanfront
 9. Silver Strand
 10. Coronado Bayfront



PD 10: Coronado Bayfront

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Figure 4.3-8
 Habitat and Land Cover Map
 Port Master Plan Update

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4.3.2.3 Bay Habitats

The District's jurisdiction covers a large area encompassing different portions of San Diego Bay and consists of 10 planning districts. However, the proposed PMPU only covers eight of these, excluding PD5, PD6, and a portion of PD7, as described further in Chapter 2, *Environmental Setting*. Bay habitats present within the proposed PMPU area are depicted on Figure 4.3-1 through 4.3-5, 4.3-7 and 4.3-8 while those present within each planning district are described in Section 4.3.2.7, *Planning District Settings*. The land cover types, habitats, and any occurrence or potential occurrence of sensitive plant and wildlife species within the proposed PMPU area as well as adjacent Bay areas are summarized below.

Subtidal Unvegetated Soft Bottom

The INRMP differentiates between shallow and deep subtidal habitat based on the biological values of these habitats (U.S. Navy 2013). Deep and moderately deep habitats maintain similar biological functions, while shallow habitat has the potential to support greater primary productivity and overall greater diversity of habitats and ecological communities. Within the Bay, unvegetated soft-bottom habitat consists of sand, soft muds, and silt. Loose rubble is often found overlying the soft sediment along the edge of the hard shoreline revetments.

Typical invertebrate species that inhabit these areas include burrowing bivalves (*Chione* spp., *Macoma nasuta*), the amphipod (*Grandidierella japonica*), bay ghost shrimp (*Neotrypaea* spp.), burrowing anemones (*Harenactis attenuata*), sabellid worms (Family Sabellidae), and tube-dwelling anemones (Family Cerianthidae). Other species typical of other non-vegetated areas of Southern California bays and harbors include sponges (Phylum Porifera), nudibranchs (Order Nudibranchia) and navanax (*Navanax inermis*), sea hare (*Aplysia californica*), and bivalves including the invasive, nonnative Asian mussel (*Musculista senhousia*). Fish species typical of soft-bottom habitat include round stingray (*Urobatis halleri*), the invasive, nonnative yellowfin goby (*Acanthogobius flavimanus*) and additional goby species (Family Gobiidae), barred sand bass and spotted sand bass (*Paralabrax nebulifer* and *P. maculatofasciatus*), specklefin midshipman (*Porichthys myriaster*), diamond turbot (*Pleuronichthys guttulatus*), and Pacific staghorn sculpin (*Leptocottus armatus*).

Subtidal Vegetated Habitat

The vegetated, shallow subtidal habitat of San Diego Bay is dominated by eelgrass (Merkel & Associates 2014). Additionally, small amounts of widgeon grass (*Ruppia maritima*) occur in the warmer, shallow flats of south San Diego Bay. The baywide eelgrass survey completed in 2020 indicated 2,598 acres of eelgrass is present within the Bay (NAVFACSW and POSD 2020). Vegetated subtidal habitats are an essential component of Southern California's coastal marine environment. Eelgrass beds function as important habitat for a variety of invertebrate, fish, and avian species. For many species, eelgrass beds are an essential biological habitat component for at least a portion of their life cycles, providing resting and feeding sites along the Pacific Flyway for avian species, and nursery sites for numerous species of fish. Eelgrass beds may be interspersed with red algae such as *Gracilaria verrucosa* and green algae, including *Ulva* spp. Typical fish species associated with eelgrass include pipefish (*Syngnathus* spp.), kelpfish (Family Clinidae), and surfperch (Family Embiotocidae).

Open Bay

The water column represents the largest habitat of San Diego Bay and the nearshore coastal area. This habitat is dominated by schooling fish species including topsmelt, northern anchovy (*Engraulis mordax*), and deepbody anchovy (*Anchoa compressa*). Pacific mackerel (*Scomber japonicus*) is common within San Diego Bay. The occurrence of these species in open water is important to several species of piscivorous birds including pelicans, terns, loons, grebes, cormorants, and mergansers. These fish also provide an important forage base for numerous species of marine mammals.

Intertidal/Shallow Subtidal Riprap

As previously stated, an estimated 70 percent of the shoreline of San Diego Bay is armored, primarily with rock riprap, to form a sloped revetment. Typical species observed along riprap include native oyster (*Ostrea lurida*), nonnative Pacific oyster (*Crassostrea gigas*), barnacles (*Balanus* spp.), mussels (*Mytilus* spp.), tubed serpulid worms (Family Serpulidae), and tunicates such as *Styela plicata*. Crevices support cryptic fish such as bay blenny, and invertebrates that include spiny lobster (*Panulirus interruptus*), rock crab (*Cancer* spp.), and shore crabs (*Pachygrapsus crassipes* and *Hemigrapsus oregonensis*). Riprap supports a variety of algal species including *Egredia menziesii*, *Ulva* spp., *Ceramium* spp., *Dictyota* spp., *Laurencia* spp., and *Enteromorpha* spp. (Davis et al. 2002). Invasive algae include *Sargassum* spp. and *Undaria pinnatifida*. Fish species typically found along subtidal portions of riprap are abundant and vary from the mouth of the Bay, which has more oceanic conditions, to protected marinas in the central and southern portions of the Bay. Species include opaleye (*Girella nigricans*), senoritas (*Oxyjulus californica*), garibaldi (*Hypsypops rubicundus*), rockfish (*Sebastes* spp.), spotted sand bass, and giant kelpfish (*Heterostichus rostratus*). Other structure-associated fish species likely to occur along this habitat include salema (*Xenistius californiensis*), juvenile black croaker (*Cheilotrema saturnum*), sargo (*Anisotremus davidsonii*), barred sand bass, and black surfperch (*Embiotoca jacksoni*) (U.S. Navy 2013).

Intertidal Flats

This habitat includes mudflats, that occur intertidally, typically along the unarmored shorelines of south San Diego Bay. Intertidal mudflats also occur in narrow bands along riprap shorelines in quiescent areas and marinas of the Bay. This habitat provides an interface with open waters of the Bay, bringing tidal exchange to adjacent marshlands and serving as outlets for stormwater runoff, nutrients, and sediment supply to the Bay. Intertidal flats are dominated by invertebrates that inhabit the sediments, providing a low-tide foraging area for shorebirds. As tides rise, the flats become forage habitat for fish, dabbling waterfowl, and piscivorous birds. Common avian species along intertidal flats include sandpipers (*Calidris* spp.), willet (*Tringa semipalmata*), marbled godwit (*Limosa fedoa*), dowitchers (*Limnodromus* spp.), plovers (Family Charadriidae), eared grebe (*Podiceps nigricollis*), and scaup (*Aythya* spp.). Fish species that forage on tidal flats during high tides include mullet (*Mugil cephalus*), California halibut (*Paralichthys californicus*), and bat ray (*Myliobatis californica*).

Sandy Beach and Dunes

This habitat includes coastal and bay sand beach and dune environments that are located along narrow fringes between subtidal and supratidal habitats within areas of higher wave energy. The sandy beach and dune habitat within the proposed PMPU area is most prominent along the Imperial

Beach shoreline and is heavily utilized by the public. Planning District 9 contains bayside dune habitat, which provides suitable nesting and roosting environments for sensitive avian species and suitable habitat for sensitive vegetation and plant species (Figure 4.3-5 and 4.3-7).

Marshes

Coastal salt marsh habitat primarily occurs in south San Diego Bay, as a series of noncontiguous remnants of once broader estuarine environments and restored wetlands. This fragmentation, along with channelization and redirection of rivers and creeks that historically drained into marshlands, and the threat of sea level rise, puts the remaining marshes at risk of decline. Many of the marshes in south San Diego Bay occur along unarmored shorelines and exist in areas and planning districts that are not described under the proposed PMPU. However, there are minor amounts of salt marsh vegetation within two planning districts (Figures 4.3-5 and 4.3-7): PD7 and, to a smaller extent, PD9. Shorebirds and other species may depend on resources across multiple marshes such that the system of marshes across San Diego Bay may work to strengthen the value of overall ecosystem functions and the value of small pockets of salt marsh habitat that exist in PD9 and PD7.

Marsh habitat provides important biological, water quality, and shoreline protection functions. Coastal salt marsh habitat is dominated by salt-tolerant vegetation including pickleweed (*Sarcocornia* and *Salicornia* spp.) and cordgrass (*Spartina foliosa*) that provides foraging habitat for numerous birds and nesting habitat for several sensitive avian species, particularly the Federally and State-listed light-footed Ridgway's rail (*Rallus obsoletus levipes*) and the State-listed Belding's savannah sparrow (*Passerculus sandwichensis beldingi*).

Upland Transition and Upland Areas

As mentioned previously, the majority of shoreline within San Diego Bay is armored. However, upland transition areas, particularly along unarmored shorelines, provide important foraging, roosting, and nesting habitat for birds. Among the most important upland transition areas are sand dunes and beaches adjacent to, and protected by, intertidal flats and marshes (PD7, PD9, and PD10) and to a lesser extent small pockets of transition habitat located at seaplane landing (PD9) and Kellogg Beach (PD1). Sand dunes and beaches could provide suitable nesting habitat for sensitive avian species such as the California least tern (*Sternula antillarum*) and western snowy plover (*Charadrius nivosus nivosus*). Other upland and transitional habitats adjacent to baylands include coastal sage scrub (PD7 and PD9), created bay fills around the periphery of the tidal flats in the southern end of the Bay (PD10), and along the Bay-side edges of the Silver Strand (PD9).

Urban/Developed

The urban/developed landscape is the predominant habitat for the terrestrial environs within many of the proposed planning districts. Urban developed landscapes are mostly composed of manicured lawns, ornamental landscaped vegetation, sidewalks, pavement, and buildings. While this setting is not ideal habitat for most wildlife species, a number of common bird species including, but not limited to, red-tailed hawk (*Buteo jamaicensis*), house finch (*Haemorhous mexicanus*), mourning dove (*Zenaida macroura*), house sparrow (*Passer domesticus*), American crow (*Corvus brachyrhynchos*), and Anna's hummingbird (*Calypte anna*) can be found in these settings. Light poles and towers within parking lots on Tidelands and mature trees closer to San Diego Bay provide nesting habitat for piscivorous species like the osprey (*Pandion haliaetus* – on light towers), black-

crowned night heron (*Nycticorax nycticorax*), snowy egret (*Egretta thula*), and great blue heron (*Ardea herodias*).

4.3.2.4 Wetlands and Sensitive Habitats

Wetlands, as defined by the U.S. Army Corps of Engineers (USACE), are present as minor amounts of coastal salt marsh as noted above. Freshwater, brackish marsh, and riparian scrub does not occur within areas described under the proposed PMPU.

Eelgrass is a rooted aquatic plant that inhabits shallow, soft-bottom habitats in quiet waters of bays and estuaries as well as sheltered coastal areas. It can form dense beds that provide substrate, food, and shelter for a variety of marine organisms. The majority of eelgrass beds in the Bay are found -5 feet MLLW or shallower and typically in water less than 20 feet deep, with light availability being the primary limiting factor for distribution and growth. Eelgrass beds occur in all planning districts in the proposed PMPU area within the Bay (Figures 4.3-1 through 4.3-8); however, the majority of eelgrass is found in the southern portion of the Bay, not within the proposed PMPU area. Eelgrass beds are not found in the open coastal waters off Imperial Beach. Eelgrass beds are considered “special aquatic sites” under the Clean Water Act (CWA). Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, eelgrass is designated as Essential Fish Habitat for various Federally managed fish species within the Pacific Coast Groundfish and Pacific Coast Salmon Fisheries Management Plans (PFMC 2008). Eelgrass is also considered a habitat area of particular concern for various species within the Pacific Coast Groundfish Fisheries Management Plan. Similar to marshes, eelgrass provides for important functions such as nutrient transformation, shoreline protection, carbon sequestration, and sediment stabilization.

4.3.2.5 Wildlife Corridors, Migration Routes, and Nurseries

The proposed PMPU planning districts are generally not continuous around the Bay and therefore do not provide a continuous source of wildlife corridors for terrestrial species that move through the region. However, the presence of undeveloped shorelines and the various salt marshes around the Bay do help connect species across local regions where they occur. Species such as coyote and bobcat can use riparian, salt marsh, and beaches to move with minor human disturbance where these areas exist and provide connections across the larger landscape.

The open waters of the Bay as well as the southern portions of the Bay provide stopover habitat for migrating waterfowl and shorebirds. San Diego Bay and the Imperial Beach shoreline, like all of California, are located within the Pacific Flyway. This important migration route is used by multiple avian species to connect breeding and wintering habitats. Whale species such as the humpback whale and California gray whale have migratory routes that occur along the California coast. Whales typically do not enter the Bay, but California gray whales are often observed in nearshore waters close to the coastline.

Although less well understood than other migratory species, Eastern Pacific green sea turtles are residents of south Bay. Green sea turtle individuals have been tracked between the Bay and known nesting sites in Mexico. This indicates that the Bay provides important habitat for these individuals within the larger context of their life cycle.

The Bay provides nursery habitat for many species of fish and invertebrates that then leave the Bay. Many species, such as California halibut and spiny lobster, find refuge as juveniles within eelgrass

habitat. Multiple bird species nest in habitats found within the Bay and adjacent habitats. Species such as Belding’s savannah sparrow, California least tern, western snowy plover, and Ridgway’s rail are all special-status species that nest on beaches or within salt marsh habitats found within the Bay.

4.3.2.6 Special-Status Species

Special-status species are those plants or animals that have been officially listed, proposed for listing, or are candidates for listing as threatened or endangered under provisions of the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), protected under the Marine Mammal Protection Act (MMPA), as well as any animal species listed as a species of special concern or fully protected by the State, and plants listed on the California Rare Plant Ranking. Sensitive species also include species listed by local or regional jurisdictions.

Reconnaissance Survey Results

On April 19, 2017, ICF biologists performed a reconnaissance level survey for terrestrial habitat types, and terrestrial sensitive plants and wildlife at each planning district. The reconnaissance survey was conducted by driving and walking throughout the PMPU planning districts, noting existing habitat conditions to identify suitable habitat for terrestrial sensitive plants and wildlife. Figures 4.3-1 through 4.3-8 provide baseline habitat mapping for each planning district and Figures 4.3-9 through 4.3-16 show Federally and State-listed wildlife and sensitive plant species observations during the reconnaissance survey, as well as documented occurrences from California Natural Diversity Database (CNDDDB) (2021), and U.S. Fish and Wildlife Service (USFWS) critical habitat for each of the planning districts. Tables 4.3-3 and 4.3-4 provide the potential to occur within each planning district for listed special-status plant and wildlife species drawn from database analysis and observations made during the reconnaissance survey. It should be noted that no reconnaissance surveys were completed for marine flora or fauna. The terrestrial plant and animal species observed during the reconnaissance level survey are documented in Table 4.3-2.

Table 4.3-2. Site Reconnaissance Species Observed within the Planning Districts

Common Name	Scientific Name	Sensitivity Status
Plants		
Red sand-verbena	<i>Abronia maritima</i>	California Rare Plant Rank 4.2
Beach sand-verbena	<i>Abronia umbellata</i> var. <i>umbellata</i>	--
Spanish-clover	<i>Acmispon americanus</i> var. <i>americanus</i>	--
Deerweed	<i>Acmispon glaber</i>	--
Tumbleweed	<i>Amaranthus albus</i>	--
Dwarf coastweed	<i>Amblyopappus pusillus</i>	--
Beach-bur	<i>Ambrosia chamissonis</i>	--
Western ragweed	<i>Ambrosia psilostachya</i>	--
Celery	<i>Apium graveolens</i>	--
Coastal sagebrush	<i>Artemisia californica</i>	--
Parish's pickleweed	<i>Arthrocnemum subterminale</i>	--
Giant reed	<i>Arundo donax</i>	--

Common Name	Scientific Name	Sensitivity Status
Big saltbush	<i>Atriplex lentiformis</i>	--
Lindley's saltbush	<i>Atriplex lindleyi</i>	--
Australian saltbush	<i>Atriplex semibaccata</i>	--
Slender wild oat	<i>Avena barbata</i>	--
Coyote brush	<i>Baccharis pilularis</i> ssp. <i>pilularis</i>	--
Mule-fat	<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i>	--
Broom baccharis	<i>Baccharis sarothroides</i>	--
Fivehorn smotherweed	<i>Bassia hyssopifolia</i>	--
Saltwort	<i>Batis maritima</i>	--
Common beggar-ticks	<i>Bidens pilosa</i>	--
Bougainvillea	<i>Bougainvillea</i> sp.	--
Sahara mustard	<i>Brassica tournefortii</i>	--
Ripgut brome	<i>Bromus diandrus</i>	--
Red brome	<i>Bromus madritensis</i> ssp. <i>rubens</i>	--
European sea rocket	<i>Cakile maritima</i>	--
California sun cup	<i>Camissoniopsis bistorta</i>	--
Beach evening-primrose	<i>Camissoniopsis cheiranthifolia</i>	--
Robust suncup	<i>Camissoniopsis robusta</i>	--
Hottentot fig	<i>Carpobrotus edulis</i>	--
Tocalote	<i>Centaurea melitensis</i>	--
Largeseed goosefoot	<i>Chenopodium macrospermum</i>	--
Goosefoot	<i>Chenopodium</i> sp.	--
California sand-aster	<i>Corethrogyne filaginifolia</i> var. <i>filaginifolia</i>	--
Pampas grass	<i>Cortaderia selloana</i>	--
Alkali weed	<i>Cressa truxillensis</i>	--
Doveweed	<i>Croton setiger</i>	--
Cryptantha	<i>Cryptantha</i> sp.	--
Salt dodder	<i>Cuscuta salina</i>	--
Coast cholla	<i>Cylindropuntia prolifera</i>	--
Fascicled tarweed	<i>Deinandra fasciculata</i>	--
Trailing African daisy	<i>Dimorphotheca fruticosa</i>	--
Shore grass	<i>Distichlis littoralis</i>	--
Salt grass	<i>Distichlis spicata</i>	--
Stinkwort	<i>Dittrichia graveolens</i>	--
Common barnyard grass	<i>Echinochloa crus-galli</i>	--
Pride of Madeira	<i>Echium candicans</i>	--
California encelia	<i>Encelia californica</i>	--
Brittlebush	<i>Encelia farinosa</i>	--
Flax-leaved horseweed	<i>Erigeron bonariensis</i>	--

Common Name	Scientific Name	Sensitivity Status
Horseweed	<i>Erigeron canadensis</i>	--
Coast California buckwheat	<i>Eriogonum fasciculatum</i>	--
Long-stem golden-yarrow	<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	--
Redstem filaree	<i>Erodium cicutarium</i>	--
California poppy	<i>Eschscholzia californica</i>	--
Gum	<i>Eucalyptus</i> sp.	--
Spotted spurge	<i>Euphorbia maculata</i>	--
Matted spurge	<i>Euphorbia serpens</i>	--
Fennel	<i>Foeniculum vulgare</i>	--
Alkali-heath	<i>Frankenia salina</i>	--
Crown daisy	<i>Glebionis coronaria</i>	--
Matchweed	<i>Gutierrezia sarothrae</i>	--
Alkali heliotrope	<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	--
Toyon	<i>Heteromeles arbutifolia</i>	--
Telegraph weed	<i>Heterotheca grandiflora</i>	--
Barley	<i>Hordeum</i> sp.	--
Coastal goldenbush	<i>Isocoma menziesii</i>	--
Salty susan	<i>Jaumea carnosa</i>	--
Prickly lettuce	<i>Lactuca serriola</i>	--
Goldentop grass	<i>Lamarckia aurea</i>	--
Lantana	<i>Lantana</i> sp.	--
Pepper-grass	<i>Lepidium</i> sp.	--
California marsh rosemary	<i>Limonium californicum</i>	--
Hardened marsh rosemary	<i>Limonium duriusculum</i>	--
Perez's marsh rosemary	<i>Limonium perezii</i>	--
Scarlet pimpernel	<i>Lysimachia arvensis</i>	--
Grass Poly	<i>Lythrum hyssopifolia</i>	--
Crocea iceplant	<i>Malephora crocea</i>	--
Laurel sumac	<i>Malosma laurina</i>	--
Horehound	<i>Marrubium vulgare</i>	--
White sweetclover	<i>Melilotus albus</i>	--
Natal grass	<i>Melinis repens</i> ssp. <i>repens</i>	--
Slender-leaved iceplant	<i>Mesembryanthemum nodiflorum</i>	--
Ngaio tree	<i>Myoporum laetum</i>	--
Medicinal water cress	<i>Nasturtium officinale</i>	--
Coast woolly-heads	<i>Nemacaulis denudata</i> var. <i>denudata</i>	California Rare Plant Rank 1B.2
Tree tobacco	<i>Nicotiana glauca</i>	--
Western prickly pear	<i>Opuntia ×occidentalis</i>	--

Common Name	Scientific Name	Sensitivity Status
Coastal prickly pear	<i>Opuntia littoralis</i>	--
Hood canary grass	<i>Phalaris paradoxa</i>	--
Arrow-weed	<i>Pluchea sericea</i>	--
Rabbit foot beard grass	<i>Polypogon monspeliensis</i>	--
Bi-color everlasting	<i>Pseudognaphalium biolettii</i>	--
Everlasting	<i>Pseudognaphalium sp.</i>	--
Radish	<i>Raphanus sativus</i>	--
Lemonadeberry	<i>Rhus integrifolia</i>	--
Castorbean	<i>Ricinus communis</i>	--
Fiddle dock	<i>Rumex pulcher</i>	--
Pacific pickleweed	<i>Salicornia pacifica</i>	--
Goodding's black willow	<i>Salix gooddingii</i>	--
Arroyo willow	<i>Salix lasiolepis</i>	--
Prickly Russian thistle	<i>Salsola tragus</i>	--
Black sage	<i>Salvia mellifera</i>	--
Mediterranean schismus	<i>Schismus barbatus</i>	--
American bulrush	<i>Schoenoplectus americanus</i>	--
Tumble mustard	<i>Sisymbrium altissimum</i>	--
London rocket	<i>Sisymbrium irio</i>	--
White nightshade	<i>Solanum americanum</i>	--
Prickly sow thistle	<i>Sonchus asper ssp. asper</i>	--
Johnson grass	<i>Sorghum halepense</i>	--
California cordgrass	<i>Spartina foliosa</i>	--
San Diego wire-lettuce	<i>Stephanomeria diegensis</i>	--
Smilo grass	<i>Stipa miliacea var. miliacea</i>	--
New Zealand spinach	<i>Tetragonia tetragonioides</i>	--
Puncture vine	<i>Tribulus terrestris</i>	--
Garden nasturtium	<i>Tropaeolum majus</i>	--
Southern cattail	<i>Typha domingensis</i>	--
Cocklebur	<i>Xanthium strumarium</i>	--
Reptile		--
Western fence lizard	<i>Sceloporus occidentalis</i>	--
Bird		--
Mallard		
Great egret	<i>Ardea alba</i>	--
Great blue heron	<i>Ardea herodias</i>	--
Green heron	<i>Butorides virescens</i>	--
Anna's hummingbird	<i>Calypte anna</i>	--
House finch	<i>Carpodacus mexicanus</i>	--
Hermit thrush	<i>Catharus guttatus</i>	--
Killdeer	<i>Charadrius vociferus</i>	--

Common Name	Scientific Name	Sensitivity Status
Rock pigeon	<i>Columbia livia</i>	--
American crow	<i>Corvus brachyrhynchos</i>	--
Snowy egret	<i>Egretta thula</i>	--
Horned lark	<i>Eremophila alpestris</i>	--
Brewer's blackbird	<i>Euphagus cyanocephalus</i>	--
American coot	<i>Fulica americana</i>	--
Black-neck stilt	<i>Himantopus mexicanus</i>	--
Barn swallow	<i>Hirundo ristica</i>	--
Western gull	<i>Larus occidentalis</i>	--
Marbled godwit	<i>Limosa fedoa</i>	--
Surf scoter	<i>Melanitta perspicillata</i>	--
Northern mockingbird	<i>Mimus polyglottos</i>	--
Osprey	<i>Pandion haliaetus</i>	--
House sparrow	<i>Passer domesticus</i>	--
California brown pelican*	<i>Pelicanus occidentalis</i>	California Fully Protected
Double-crested cormorant	<i>Phalacrocorax auritus</i>	--
American avocet	<i>Recurvirostra americana</i>	--
Black phoebe	<i>Sayornis nigricans</i>	--
California least tern	<i>Sterna antillarum browni</i>	Federally Endangered, State Endangered, California Fully Protected
Caspian tern	<i>Sterna caspia</i>	--
Eurasian collard dove	<i>Streptopelia decaocto</i>	--
European starling	<i>Sturnus vulgaris</i>	--
Western kingbird	<i>Tyrannus verticalis</i>	--
Mourning dove	<i>Zenaida macroura</i>	--
Mammal		--
Audubon's cottontail	<i>Sylvilagus audubonii</i>	

Sensitivity Status Key

Federal: Federal Endangered Species Act (ESA)

Threatened or Endangered

State: California Endangered Species Act (CESA)

Threatened or Endangered

Federal

FE – listed as endangered under the Federal Endangered Species Act.

FT – listed as threatened under the Federal Endangered Species Act.

.1 – Seriously endangered in California, .2 – Fairly endangered in California, .3 – Not very endangered in California.

State

CNPS: California Native Plant Society Rare Plant Rank (CRPR):

1B: Considered rare, threatened, or endangered in California and elsewhere

2: Plants rare, threatened, or endangered in California, but more common elsewhere

3: Plants for which we need more information – review list.

4: Plants of limited distribution a watch list.

Decimal notations:

Sensitive Plant Species Database Results

Terrestrial

The potential presence of sensitive plant species within each of the planning districts was determined by reviewing the CNDDDB and California Native Plant Society (CNPS) database, and by requesting an official threatened and endangered species list from the USFWS Information, Planning, and Consultation System (IPAC). The CNDDDB record search for sensitive terrestrial plant species was conducted for nine quads centered on the United States Geological Survey (USGS) National City, California 7.5 quadrangle map. The CNPS search was performed for the National City, Point Loma, and Imperial Beach 7.5 quadrangle maps. Due to the varying topography occurring within the three quadrangle maps, the search was further refined to only include species with habitat requirements within 0 and 20 feet elevation, which would exclude plants that may occur in habitats that are not present within the planning districts. The USFWS list of threatened and endangered species was generated by creating a polygon for each of the planning districts through the IPAC web application tool. This search criteria yielded 44 sensitive plant species. From this list it was determined that 21 sensitive plant species have potential to occur, of which 2 were observed within the boundaries of the planning districts during the reconnaissance level field surveys. A full description of these species and their potential to occur is presented in Table 4.3-3. Note that potential for all special-status plant species is limited to PD7 and PD9 of the proposed PMPU area.



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Figure 4.3-9
 Sensitive Species Observations
 Port Master Plan Update

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Sources:
 CNDDB; FWS Critical Habitat;
 Port of San Diego (2020);
 Imagery - ESRI (2020)

- Planning District
- Sensitive Species Observations
- ICF (2017)
- California Least Tern
- CNDDB (2020)
- ▲ California Least Tern
- ▲ Western Snowy Plover

0 500 1,000
 Feet
 1 in = 1,500 ft

- Planning Districts**
1. Shelter Island
 2. Harbor Island
 3. Embarcadero
 4. Working Waterfront
 7. South Bay
 8. Imperial Beach Oceanfront
 9. Silver Strand
 10. Coronado Bayfront



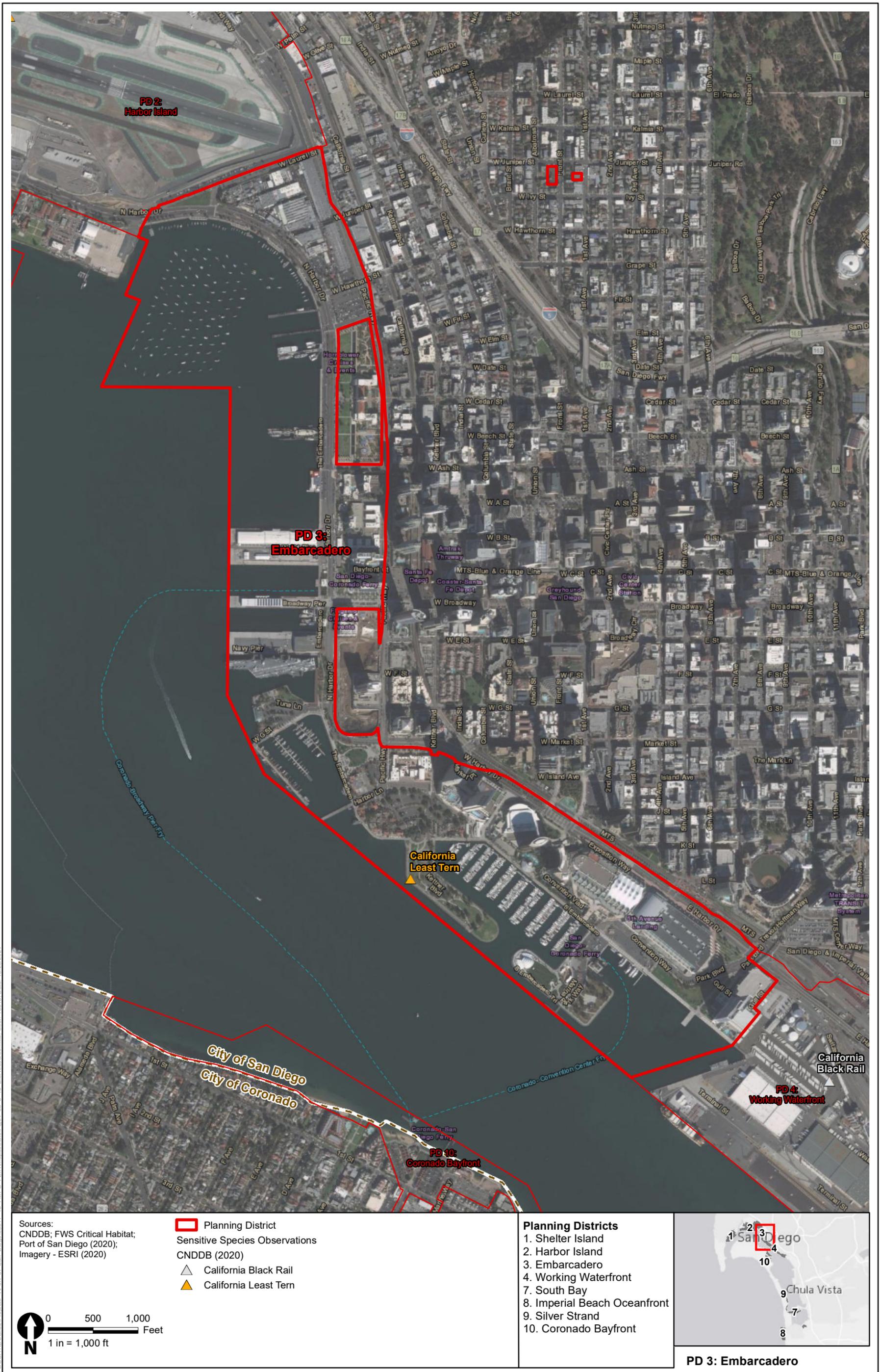
PD 2: Harbor Island

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Figure 4.3-10
 Sensitive Species Observations
 Port Master Plan Update

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Sources:
 CNDDB; FWS Critical Habitat;
 Port of San Diego (2020);
 Imagery - ESRI (2020)

- Planning District
- ▲ Sensitive Species Observations
- CNDDB (2020)
- California Black Rail
- California Least Tern

- Planning Districts**
1. Shelter Island
 2. Harbor Island
 3. Embarcadero
 4. Working Waterfront
 7. South Bay
 8. Imperial Beach Oceanfront
 9. Silver Strand
 10. Coronado Bayfront



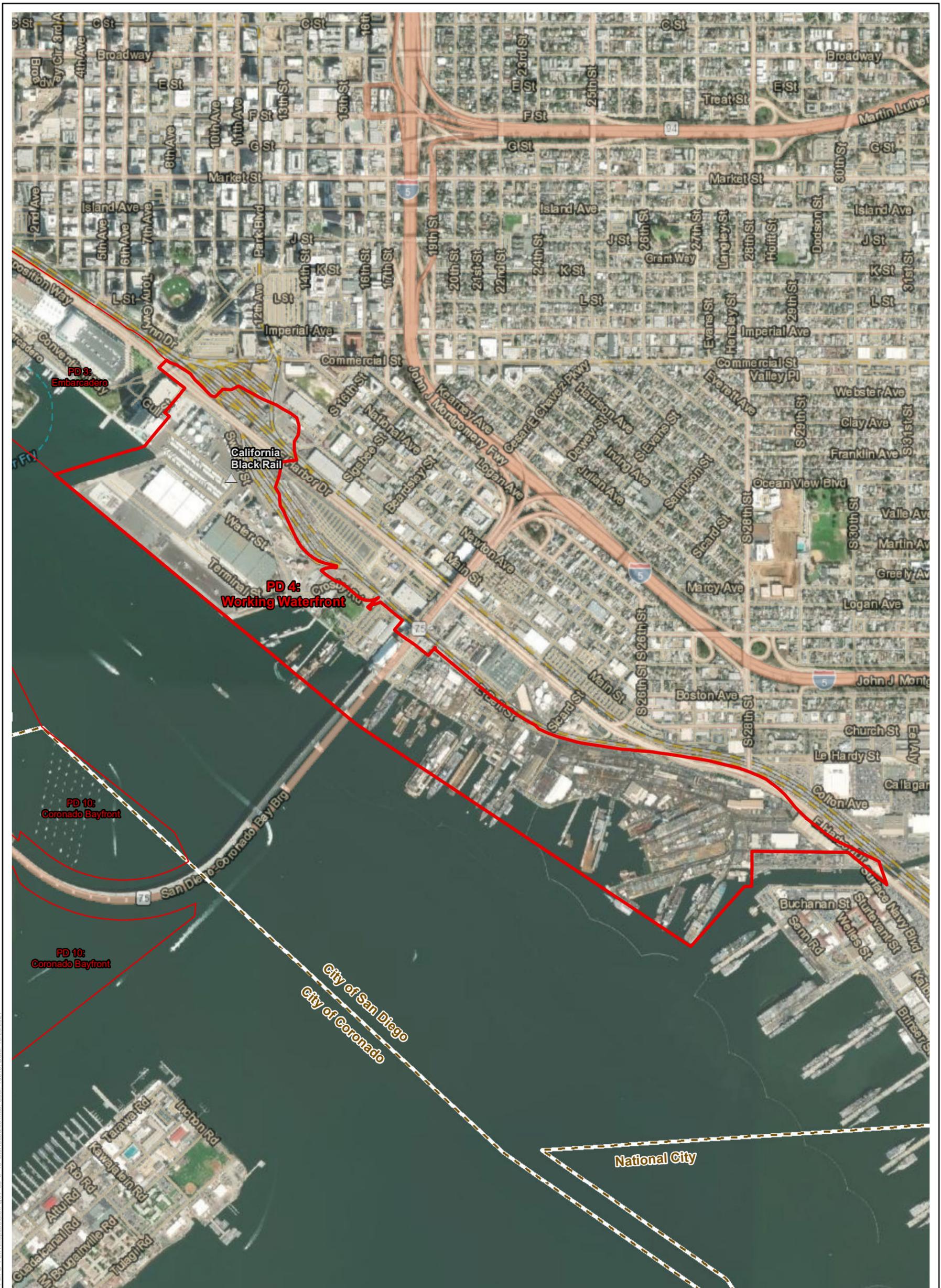
PD 3: Embarcadero

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Figure 4.3-11
 Sensitive Species Observations
 Port Master Plan Update

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Sources:
 CNDDB; FWS Critical Habitat;
 Port of San Diego (2020);
 Imagery - ESRI (2020)

Planning District
 Sensitive Species Observations
 CNDDB (2020)
 California Black Rail

- Planning Districts**
1. Shelter Island
 2. Harbor Island
 3. Embarcadero
 4. Working Waterfront
 7. South Bay
 8. Imperial Beach Oceanfront
 9. Silver Strand
 10. Coronado Bayfront

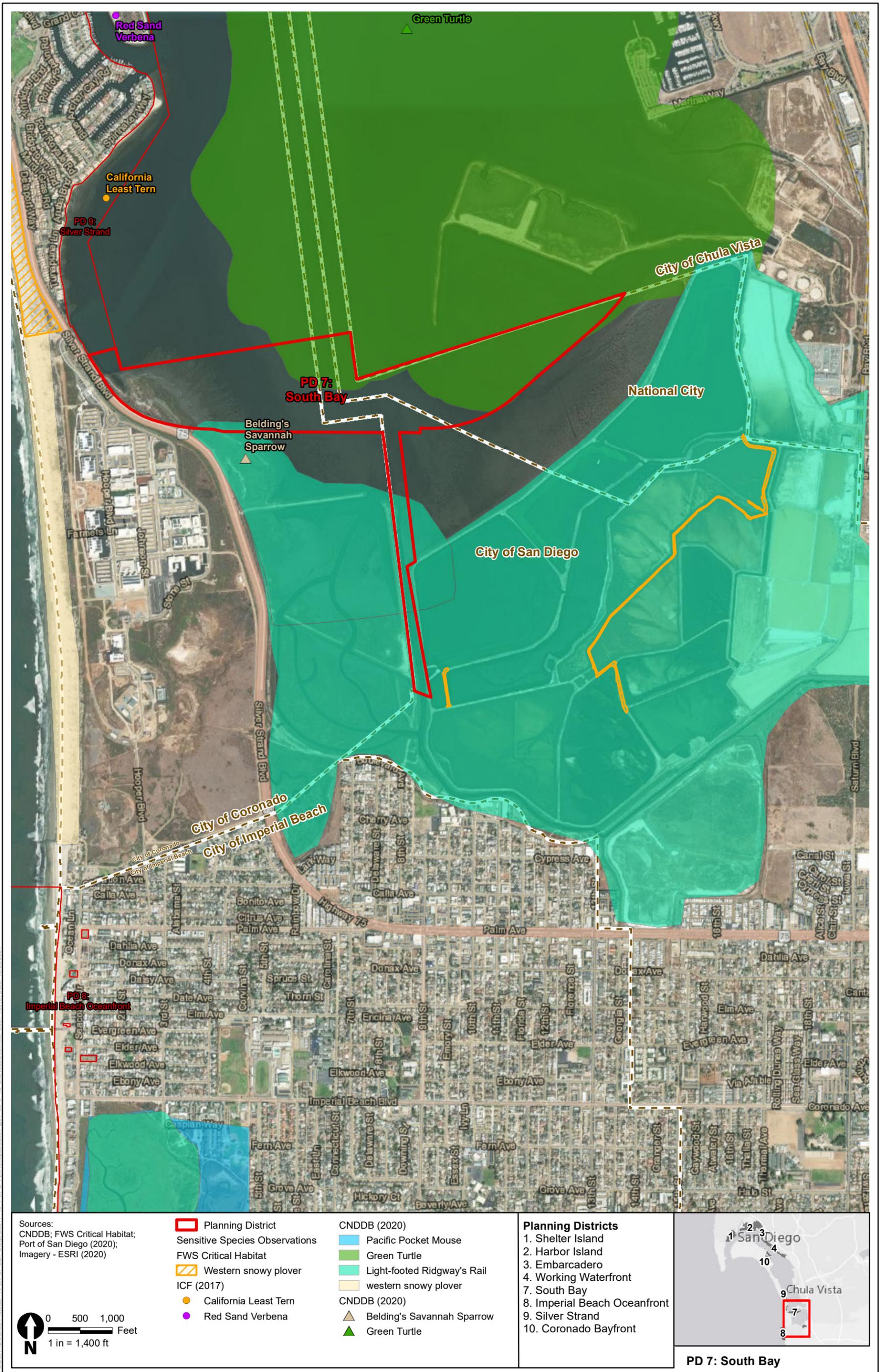


PD 4: Working Waterfront



Figure 4.3-12
 Sensitive Species Observations
 Port Master Plan Update

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Figure 4.3-13
 Sensitive Species Observations
 Port Master Plan Update

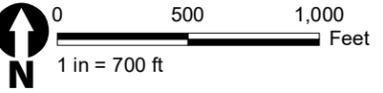
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**PD 8:
Imperial Beach Oceanfront**

<p>Sources: CNDDB; FWS Critical Habitat; Port of San Diego (2020); Imagery - ESRI (2020)</p>	<p> Planning District Sensitive Species Observations FWS Critical Habitat Western snowy plover</p>	<p>CNDDB (2020) Pacific Pocket Mouse Light-footed Ridgway's Rail western snowy plover</p>	<p>Planning Districts 1. Shelter Island 2. Harbor Island 3. Embarcadero 4. Working Waterfront 7. South Bay 8. Imperial Beach Oceanfront 9. Silver Strand 10. Coronado Bayfront</p>	
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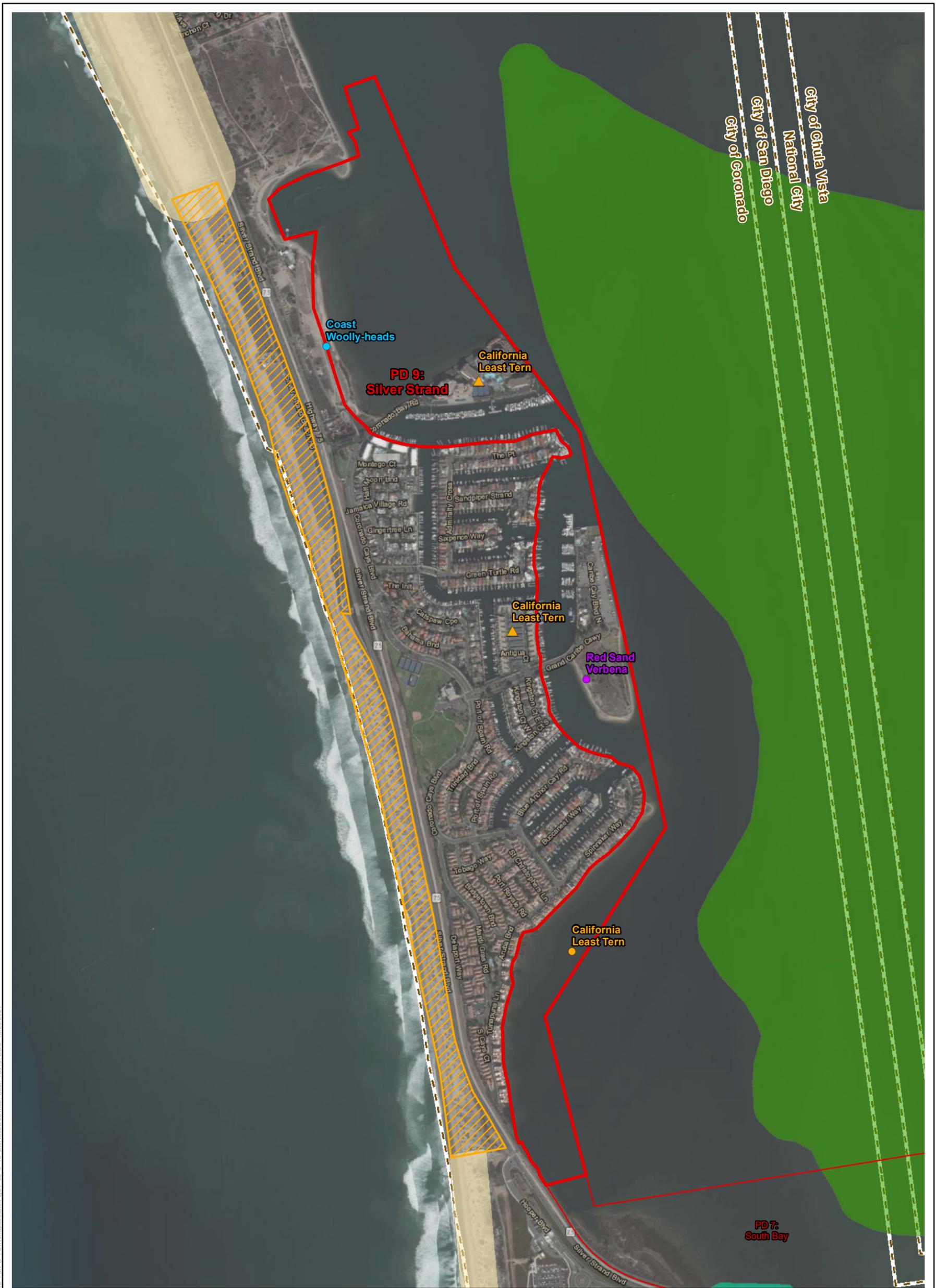


PD 8: Imperial Beach Oceanfront



Figure 4.3-14
Sensitive Species Observations
Port Master Plan Update

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Sources:
 CNDDB; FWS Critical Habitat;
 Port of San Diego (2020);
 Imagery - ESRI (2020)

0 500 1,000
 Feet
 1 in = 1,000 ft

- Planning District
- Sensitive Species Observations
- FWS Critical Habitat
- Western snowy plover
- ICF (2017)
- California Least Tern
- Coast Woolly-heads
- Red Sand Verbena

- CNDDB (2020)
- Green Turtle
 - Light-footed Ridgway's Rail
 - western snowy plover
- CNDDB (2020)
- ▲ California Least Tern

- Planning Districts**
1. Shelter Island
 2. Harbor Island
 3. Embarcadero
 4. Working Waterfront
 7. South Bay
 8. Imperial Beach Oceanfront
 9. Silver Strand
 10. Coronado Bayfront



PD 9: Silver Strand

\PDC\GIS\Projects\4\Port of San Diego\00517_16_PMP\U_P\PEIR\mxd\BIO\Fig04_03_9_16_BioResource.mxd; User: 19316; Date: 10/29/2021



Figure 4.3-15
 Sensitive Species Observations
 Port Master Plan Update

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Sources:
 CNDDDB; FWS Critical Habitat;
 Port of San Diego (2020);
 Imagery - ESRI (2020)

0 500 1,000 Feet
 1 in = 1,000 ft

- Planning District
- Sensitive Species Observations
- FWS Critical Habitat
- Western snowy plover
- CNDDDB (2020)
- ▲ California Black Rail
- ▲ California Least Tern

- Planning Districts**
1. Shelter Island
 2. Harbor Island
 3. Embarcadero
 4. Working Waterfront
 7. South Bay
 8. Imperial Beach Oceanfront
 9. Silver Strand
 10. Coronado Bayfront



PD 10: Coronado Bayfront

\PDC\GIS\Projects\4\Port of San Diego\00517_16_PMP\U_P\PEIR\mxd\BIO\Fig4_03_9_16_BioResource.mxd; User: 19316; Date: 10/29/2021



Figure 4.3-16
 Sensitive Species Observations
 Port Master Plan Update

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Table 4.3-3. Sensitive Plant Species with Potential to Occur Within the Proposed PMPU Planning Area

Common Name (Scientific Name)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
Red sand-verbena (<i>Abronia maritima</i>)	CRPR 4.2	Perennial herb. Coastal dunes; 0–100 m (0–328 ft). Blooming period: February–November.	Yes	Present	Several individuals of red sand-verbena were detected within the boundary of PD9.
Nuttall's lotus (<i>Acmispon prostrates</i>)	CRPR 1B.1	Annual herb. Coastal dunes and sandy coastal scrub; 0–10 m (0–32 ft). Blooming period: March–July.	No	High	Several individuals of Nuttall's lotus were detected adjacent to PD9 but outside the boundary.
Aphanisma (<i>Aphanisma blitoides</i>)	CRPR 1B.2	Annual herb. Sandy soils in coastal bluff scrub, coastal dunes, and coastal scrub; 1–305 m (3–1,000 ft). Blooming period: March–June.	No	Moderate	Suitable dune habitat is present in PD9, but no current records for this species occur in the vicinity of PD9.
Coastal dunes milk-vetch (<i>Astragalus tener</i> var. <i>titi</i>)	FE, SE, CRPR 1B.1	Annual herb. Often in vernal mesic areas in sandy coastal bluff scrub, coastal dunes, and mesic coastal prairie; 1–50 m (3–164 ft). Blooming period: March–May.	No	Moderate	Suitable dune habitat is present in PD9, but no current records of this species occur in the vicinity of PD9.
Coulter's saltbush (<i>Atriplex coulteri</i>)	CRPR 1B.2	Perennial herb. Alkaline or clay soils in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland; 3–460 m (9–1,509 ft). Blooming period: March–October.	No	Low	Marginally suitable soils are present in PD9.
South coast saltscale (<i>Atriplex pacifica</i>)	CRPR 1B.2	Annual herb. Coastal bluff scrub, coastal dunes, coastal scrub, playas; 0–140 m (0–459 ft). Blooming period: March–October.	No	Moderate	Suitable dune habitat is present in PD9, but no current records of this species occur in the vicinity of PD9.
Lewis' evening-primrose (<i>Camissoniopsis lewisii</i>)	CRPR 3	Annual herb. Sandy or clay soils in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland; 0–300 m (0–984 ft). Blooming period: March–June.	No	High	Suitable dune habitat is present in PD9, and there are documented occurrences in the vicinity of PD9.

Common Name (Scientific Name)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
Orcutt's pincushion (<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>)	CRPR 1B.1	Annual herb. Sandy soils in coastal bluff scrub and coastal dunes; 0–100 m (0–328 ft). Blooming period: January–August.	No	High	Suitable dune habitat is present in PD9, and there are documented occurrences in the vicinity of PD9.
Salt marsh bird's-beak (<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>)	FE, SE, CRPR 1B.2	Hemiparasitic annual herb. Coastal dunes and coastal salt marshes and swamps; 0–30 m (0–98 ft). Blooming period: May–October.	No	High	Suitable dune habitat is present in PD9, and suitable coastal marsh habitat is present in PD7 for this species. Documented occurrences of this species are recorded from the vicinity of both planning districts.
Palmer's frankenia (<i>Frankenia palmeri</i>)	CRPR 2B.1	Perennial herb. Coastal dunes, coastal salt marshes and swamps, playas; 0–10 m (0–32 ft). Blooming period: May–July.	No	High	Suitable dune habitat is present in PD9, and suitable coastal marsh habitat is present in PD7 for this species. Documented occurrences of this species are recorded from the vicinity of both planning districts.
Beach goldenaster (<i>Heterotheca sessiliflora</i> ssp. <i>Sessiliflora</i>)	CRPR 1B.1	Perennial herb. Coastal chaparral, coastal dunes, and coastal scrub; 0–1,225 m (0–4,018 ft). Blooming period: March–December.	No	High	Suitable dune habitat is present in PD9 and suitable coastal scrub is present in PD7 for this species. Documented occurrences of this species are recorded from the vicinity of both planning districts.
Vernal barley (<i>Hordeum intercedens</i>)	CRPR 3.2	Annual herb. Coastal dunes, coastal scrub, saline flats and depressions in valley and foothill grassland, and vernal pools; 5–1,000 m (16–3,280 ft). Blooming period: March–June	No	High	Suitable dune habitat is present in PD9, and there are documented occurrences in the vicinity of PD9.
Decumbent goldenbush (<i>Isocoma menziesii</i> var. <i>decumbens</i>)	CRPR 1B.2	Perennial shrub. Chaparral and in sandy coastal scrub, dunes, often in sandy disturbed areas; 10–135 m (33–443 ft). Blooming period: April–November.	No	Moderate	Suitable dune habitat is present in PD9, but no documented records of this species occur in the vicinity of PD9.

Common Name (<i>Scientific Name</i>)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
Southwestern spiny rush (<i>Juncus acutus</i> ssp. <i>leopoldii</i>)	CRPR 4.2	Perennial rhizomatous herb. Mesic soils in coastal dunes, alkaline seeps in meadows and seeps, and coastal salt marshes and swamps; 3–900 m (9–2,953 ft). Blooming period: May–June.	No	High	Suitable dune habitat is present in PD9, and suitable coastal marsh habitat is present in PD7 for this species. Documented occurrences of this species are recorded from the vicinity of both planning districts.
California box thorn (<i>Lycium californicum</i>)	CRPR 4.2	Perennial shrub. Coastal bluff scrub and coastal scrub; 5–150 m (16–492 ft). Blooming period: December–August.	No	High	Suitable coastal sage habitat is present in PD7 and PD9, and California box-thorn was observed in the close vicinity of PD9.
Coast woolly-heads (<i>Nemacaulis denudata</i> var. <i>denudata</i>)	CRPR 1B.2	Annual herb. Coastal dunes; 0–100 m (0–328 ft). Blooming period: April–September.	Yes	Present	Several individuals of coast woolly-heads were detected within the boundary of PD9.
Slender cottonheads (<i>Nemacaulis denudata</i> var. <i>gracilis</i>)	CRPR 2B.2	Annual herb. Coastal dunes, desert dunes, and Sonoran desert scrub; -50–400 m (164–1,312 ft). Blooming period: March–May.	No	Moderate	Suitable dune habitat is present in PD9, but no current records of this species exist in the vicinity of PD9.
Short-lobed broomrape (<i>Orobanche parishii</i> ssp. <i>brachyloba</i>)	CRPR 4.2	Parasitic perennial herb. Sandy coastal bluff scrub, coastal dunes, and coastal scrub; 3–305 m (9–1,000 ft). Blooming period: April–October.	No	Moderate	Suitable dune habitat is present in PD9, but there area no current records of this species occurring in the vicinity of PD9.
Brand's star phacelia (<i>Phacelia stellaris</i>)	CRPR 1B.1	Annual herb. Coastal dunes and sandy sites within coastal scrub; 1–400 m (3–1,312 ft). Blooming period: March–June.	No	High	Suitable dune habitat is present in PD9, and there are known occurrences in the vicinity of PD9.

Common Name (Scientific Name)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
estuary seablite (<i>Suaeda esteroa</i>)	CRPR 1B.2	Perennial herb. Coastal salt marshes and swamps; 0–5 m (0–16 ft). Blooming period: May–January.	No	High	Suitable coastal marsh habitat is present in PD7, and a known occurrence is in the vicinity of PD7.

Sources: USFWS IPAC 2017, CNPS 2017, CNDDDB 2017.

m = meters; ft = feet

Sensitivity Status Key

Federal: Federal Endangered Species Act (ESA) Threatened or Endangered

State: California Endangered Species Act (CESA) Threatened or Endangered

Federal

FE - listed as endangered under the Federal Endangered Species Act.

FT - listed as threatened under the Federal Endangered Species Act.

State

SE - listed as endangered under the California Endangered Species Act.

CNPS: California Native Plant Society Rare Plant Rank (CRPR):

1B: Considered rare, threatened, or endangered in California and elsewhere

2: Plants rare, threatened, or endangered in California, but more common elsewhere

3: Plants for which we need more information – review list.

4: Plants of limited distribution a watch list.

Decimal notations: .1 – Seriously endangered in California, .2 – Fairly endangered in California, .3 – Not very endangered in California.

Sensitive Plant Species Descriptions

Terrestrial

The following section provides a brief description of the terrestrial plant species that were observed during the reconnaissance surveys or have a high likelihood to occur within one or more of the planning districts based on the database search results. Species with a moderate or low potential to occur are listed in Table 4.3-3 above. The species discussion does not exclude the potential for other rare plants to occur within the planning districts.

Red Sand-Verbena (*Abronia maritima*)

This perennial spreading herb is found near beaches and coastal dune settings and stands less than 5 inches in height. The species is tolerant of saline environments, and can be found at elevations between 0 and 328 feet. Suitable habitat occurs in undisturbed dune and sandy beach settings, which occur primarily in the south bay. The red sand-verbena is not listed under the ESA or CESA; however, it has a California Rare Plant Rank (CRPR) of 4.2, which indicates the plant has a limited distribution in California and is considered fairly endangered. The species was observed during the reconnaissance surveys within PD9 (Figure 4-3-15), where the dune habitat has little to no disturbance present. The beach and dune areas that occur in PD8 do not support sensitive vegetation species due to the frequent disturbances present.

Lewis' Evening Primrose (*Camissoniopsis lewisii*)

Lewis' evening primrose is a small annual herb with yellow flowers that blooms between March and June, and can be found in coastal habitats such as dunes, beaches, and coastal scrub. This species has a CRPR rank of 3, which indicates further research is required to assess threats and population size; however, it meets many of the definitions under CESA to become listed. The species was not observed in the field during the reconnaissance surveys; however, there is a high potential in the dune habitat present within PD9. The last confirmed detection of Lewis's evening primrose was in 2013. Dune/beach habitat present within PD8 does not have a high likelihood to contain this species due to the heavily disturbed nature of the beach and dunes.

Orcutt's Pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)

Orcutt's pincushion is an annual herb that produces a small yellow flower. This species prefers sandy soils along coastal bluffs and dunes, and flowers between January and August. Orcutt's pincushion has a CRPR rank of 1B.1, which indicates it is rare, threatened, or endangered in California and elsewhere, and is considered seriously threatened in California, with over 80 percent of occurrences threatened or with a high degree and immediacy of threat. The species was not observed during the reconnaissance surveys; however, undisturbed dune habitat in PD9 provides high quality habitat for the species to occur. The species is unlikely to be found in dune and beach habitat in other planning districts because those habitats are heavily disturbed with invasive species and frequent human visitation.

Salt Marsh Bird's-Beak (*Chloropyron maritimum* ssp. *maritimum*)

Salt marsh bird's-beak is a hemiparasitic annual herb in the broomrape family. The species can be found in coastal dunes, salt marshes, and wetlands. This species is both Federally and State listed as

endangered, and has a CRPR ranking of 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and moderately threatened in California, with 20–80 percent of occurrences threatened or with a moderate degree and immediacy of threat. Salt marsh bird's beak was not observed during reconnaissance surveys; however, there is high quality suitable habitat within PD9.

Palmer's Frankenia (*Frankenia palmeri*)

Palmer's frankenia is a perennial herb that blooms between May and July and occurs along coastal strand, coastal salt marsh, alkali sink, and wetland riparian vegetation communities. The species is most likely to be found in salt-marsh, dune, playa, and coastal habitats. Palmer's frankenia has a CRPR rank of 2B.1, indicating that it is rare, threatened, or endangered in California but more common elsewhere, and seriously threatened in California with over 80 percent of occurrences threatened with a high degree and immediacy of threat. There is a high likelihood for occurrence of Palmer's frankenia due to the presence of suitable habitat for this species in PD9. However, the species was not detected during reconnaissance surveys.

Beach Goldenaster (*Heterotheca sessiliflora ssp. sessiliflora*)

Beach goldenaster is a perennial herb which blooms from May through December and produces a yellow flower. It can be found in coastal dunes, coastal scrub, and coastal chaparral settings. The species has a CRPR ranking of 1B.1, which indicates it is rare, threatened, or endangered in California and elsewhere, and is considered seriously threatened in California, with over 80 percent of occurrences threatened or with a high degree and immediacy of threat. However, it is not listed under the ESA or CESA at this time. The dune habitat within PD9 contains the highest likelihood for the species to occur; however, it may also occur in other planning districts where there is undisturbed beach and dune habitat.

Vernal Barley (*Hordeum intercedens*)

Vernal barley is an annual herb that can be found within coastal dunes, saline flats, valley depressions, grasslands, and vernal pools. Vernal barley rarity status is ranked 3.2 under CRPR. This indicates that additional information is needed to accurately estimate threats to the species; however, it is considered fairly endangered in California. This species was not observed during the reconnaissance surveys, but there is high potential for it to occur within PD9 due to the high-quality dune and salt flat habitat present.

Southwestern Spiny Rush (*Juncus acutus ssp. leopoldii*)

Southwestern spiny rush is a perennial rhizomatous herb that blooms between May and June, and can be found in alkaline seeps in meadows, wetlands, coastal salt marsh, and coastal dunes. The species has a CRPR rank of 4.2, indicating its distribution in California is limited, and the plant is considered fairly endangered in California. Suitable dune habitat is present in PD9, and salt marsh habitat is present in PD 7. This species was not observed during the reconnaissance surveys.

California Box Thorn (*Lycium californicum*)

California boxthorn is a shrub commonly found in coastal sage scrub communities and blooms between March and August. California box thorn has a CRPR rank of 4.2, indicating that the plant has a limited distribution in California and is considered fairly endangered. While coastal sage scrub is

not a dominant vegetation community within the planning districts, the species was observed within the vicinity of PD9 but outside the PMPU area during the reconnaissance surveys.

Estuary Seablite (*Suaeda esteroa*)

Estuary seablite is a perennial herb that occurs within coastal marsh habitat. This species has a CRPR ranking of 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and is considered moderately threatened in California, with many occurrences threatened by coastal development and recreational activities. There is a high potential for the plant to occur within the coastal marsh habitat found in PD7. This species was not observed during the reconnaissance surveys.

Coastal Woolly-Heads (*Nemacaulis denudata* var. *denudata*)

Coastal woolly-heads is an annual herb that occurs within dune habitat. This species has a CRPR ranking of 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and is considered moderately threatened in California, with many occurrences threatened by coastal development, trampling from foot traffic, and nonnative plants. There is a high potential for the plant to occur within the dune habitat found in PD9, and several individuals of coastal woolly-heads were observed during reconnaissance survey on the western border of PD9 (Figure 4-3-15).

Brand's Star Phacelia (*Phacelia stellaris*)

Brand's star phacelia is an annual herb that is found in coastal dunes and coastal sage scrub habitat. Blooming period is between March and June. Brand's star phacelia has a CRPR rank of 1B.1, which indicates it is rare, threatened, or endangered in California and elsewhere, and is considered seriously threatened in California, with over 80 percent of occurrences threatened or with a high degree and immediacy of threat. Brand's star phacelia was not observed during reconnaissance surveys; however, there is high quality suitable habitat within PD9.

Marine

Eelgrass (*Zostera marina* and *Zostera pacifica*)

Eelgrass is a marine plant that provides predation refuge and serves as an important food source for a diverse group of marine species. Seagrasses, including eelgrass beds, reduce wave and current action, thus reducing erosion by stabilizing sediment. Eelgrass also improves water quality by trapping suspended particulates and generates oxygen for the marine environment during daylight hours. Although eelgrass is not a threatened or endangered species, it is considered essential fish habitat and a Habitat Area of Particular Concern (HAPC) under the Magnuson-Stevens Fishery Management and Conservation Act (MSA), the Federal legislation that protects waters and substrates necessary for fish spawning, breeding, feeding, or growth to maturity. Because of its designation as a HAPC and its notable contributions to ecological processes, it is also protected under the Clean Water Act and is managed by the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) in California through adherence to the California Eelgrass Mitigation Policy (NOAA 2014).

There were 2,598 acres of eelgrass mapped as part of a baywide survey in 2020 (NAVFACSW and District 2020). Given the abundance of eelgrass within San Diego Bay, its preferred habitat in shallow water, and its designation as HAPC, the District and District tenants are required to mitigate

for impacts to eelgrass associated with infrastructure improvements and dredging projects that lead to loss of eelgrass acreage.

Kelp

Kelp refers to a group of brown algae (Phylum Phaeophyta) in the order Laminariales. The complexity of kelps produces a highly structured habitat that is one of the most productive coastal marine habitats of the eastern Pacific kelp forests. In Southern California, the dominant canopy forming kelp forest species is the giant kelp (*Macrocystis pyrifera*). Kelp height and structure provide important foraging and shelter habitat for commercial and recreationally important marine species including spiny lobster (*Panulirus interruptus*), white seabass (*Atractoscion nobilis*), and yellowtail (*Seriola lalandi*). Detached kelp often floats offshore into pelagic waters and provides valuable habitat for small fish species, which commonly aggregate around floating debris for shelter. Kelp habitat does not exist in San Diego Bay, but can occur on cobble substrate offshore of Imperial Beach.

Similar to the seagrasses, kelp forests are recognized as a HAPC by NOAA NMFS and are essential fish habitat for multiple managed fish species that are present in the Pacific Ocean offshore of Southern California. Thus, any project that threatens to impact kelp forest productivity or cover will require modification or mitigation measures to ensure ecological processes are maintained.

Sensitive Wildlife Database Results

The potential presence of sensitive terrestrial wildlife species within each planning district was determined by reviewing the CNDDDB database and requesting an official threatened and endangered species list from USFWS IPAC. A CNDDDB record search for special-status terrestrial wildlife species was conducted for the nine quadrangle maps centered around the National City 7.5 minute quadrangle map (CDFW 2017). The USFWS list of threatened and endangered species was generated by creating a polygon for each planning district through the IPAC web application tool. Based on the results of the field reconnaissance and desktop survey, it was determined that 32 sensitive wildlife species have potential to occur in one or multiple planning districts. A full description of these species and their potential to occur within the planning area is presented in Table 4.3-4.

The desktop analysis for sensitive marine species included review of marine mammals in Southern California. Two primary sources were used to determine marine mammal species present and their likelihood to occur in nearshore coastal waters (relative to PD8) or within PMPU planning districts within San Diego Bay. The first resource implemented multiple aerial marine mammal surveys over Southern California coastal waters between 2008 and 2013 (Jefferson et al. 2014). The second resource utilized was the *Monitoring Report for Fuel Pier Replacement Project (P-151) at Naval Base Point Loma* (NAVFACSW 2016). This report provided results from comprehensive marine mammal monitoring performed during the construction of a fuel pier at Naval Base Point Loma. In addition to providing observational reports, the document reviews the marine mammals that were anticipated to be observed and for which an incidental harassment authorization was obtained from NOAA NMFS.

Table 4.3-4. Sensitive Wildlife Species with Potential to Occur Within the Proposed PMPU Area

Common Name (<i>Scientific Name</i>)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
Invertebrates					
White abalone	FE	Rocky subtidal from 50 to 180 feet ranging from Point Conception, California to Punta Abreojos, Baja California.		Low	Portions of PD8 have rocky substrate that could support white abalone; critical habitat is not designated for this species.
Reptiles					
Silvery legless lizard (<i>Anniella pulchra pulchra</i>)	CSC	Dry, loose sandy soils, from inland foothills to coastal sand dunes.	No	Moderate	Suitable dune habitat present in PD9.
Eastern Pacific green sea turtle (<i>Chelonia mydas</i>)	FT	Typically occurs within southern San Diego Bay within or adjacent to the shallow eelgrass beds. Individuals may enter or leave the Bay and can be found between San Diego and Mexico.	No	High	Green sea turtles may periodically occur throughout San Diego Bay, but spend a majority of the time within south San Diego Bay.
Birds					
Western snowy plover (<i>Charadrius nivosus</i> ssp. <i>nivosus</i>)	FT	Requires open, relatively flat areas with little or no vegetation, including undisturbed beaches, salt flats, playas, dredge spoils, levees, and river bars. Winter distribution is more coastal, and may include sewage treatment ponds and agricultural wastewater sites.	No	Breeding: Very Low Foraging: High	Western snowy plovers are known to forage throughout wetlands and mudflats in San Diego Bay.
Clark's marsh wren (<i>Cistothorus palustris clarkae</i>)	CSC	Restricted to freshwater and brackish marshes dominated with cattails and bulrushes.	No	Breeding: Moderate Foraging: Moderate	PD7 and PD9 provide suitable nesting and foraging habitat.
American peregrine falcon (<i>Falco peregrines anatum</i>)	FP	Occurs along coast; breeds in woodland, forest, and coastal	No	Breeding: None	Suitable foraging habitat is present within the

Common Name (<i>Scientific Name</i>)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
		habitats. Riparian areas important year-round habitats.		Foraging: Moderate	planning districts due to species presence in urban areas.
Gull-billed tern (<i>Gelochelidon nilotica</i>)	CSC	Nesting habitat consists of bare islets of fine clay soils.	No	Breeding: High Foraging: High	CNDDDB records in PD2, PD3, and PD9. Suitable nesting habitat occurs in PD7 and PD9. However, the salt works of south San Diego Bay is the only known site for this species in San Diego County. Known to forage throughout San Diego Bay.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	CSC	Breeds and forages in open habitats interspersed with shrubs and small trees, including disturbed habitats.	No	Breeding: Moderate Foraging: Moderate	Uncommon to San Diego Bay. Suitable upland habitat occurs within PD7 and PD9.
Least bittern (<i>Ixobrychus exilis</i>)	CSC	Freshwater or brackish marshes with tall emergent vegetation.	No	Breeding: Moderate Foraging: Moderate	Suitable aquatic habitat occurs within PD7 and PD9.
Belding's Savannah sparrow (<i>Passerunculus sandwichensis beldingi</i>)	SE	Resident species that is restricted to coastal marshes dominated by pickleweed. It is known to occur within five general areas of coastal San Diego County.	No	Breeding: High Foraging: High	Suitable coastal marsh within PD7. May also occur in suitable nesting habitat in PD9.
American white pelican (<i>Pelecanus erythrorhynchos</i>)	CSC	Historically, nested at large lakes throughout California; the only breeding colonies in the state occur at lower Klamath National Wildlife Refuge, Siskiyou County, and at Clear Lake, Modoc County. Frequents freshwater lakes with islands for breeding; inhabits river sloughs,	No	Breeding: None Foraging: Low	The species is not known to nest within any of the planning districts. May occasionally forage within San Diego Bay.

Common Name (<i>Scientific Name</i>)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
		freshwater marshes, salt ponds, and coastal bays during the rest of the year.			
California brown pelican (<i>Pelcanus occidentalis californicus</i>)	FP	Nesting typically occurs on islands on ground or within shrubs. Commonly observed foraging throughout San Diego Bay and near coastal areas for schooling fish species like anchovy, sardine, and mackerel.	Yes	Breeding: None Foraging: High	Pelicans are commonly found throughout San Diego Bay. Foraging potential is high anywhere schooling fish species can be found. Birds also commonly associate with fishing boats as recreational fisherman discard bait.
Cassin's auklet (<i>Ptychoramphus aleuticus</i>)	CSC	Nests on islands off the California coast. Nests are earthen burrows excavated by adults, rocky crevices, cracks under buildings, or larger caves. Forages in open waters for small fish and crustaceans.	No	Breeding: None Foraging: Low	The species is not known to nest within any of the planning districts. May occasionally forage within San Diego Bay.
Ridgways rail (<i>Rallus longirostris levipes</i>)	FE/SE, FP	Freshwater and brackish emergent wetlands, coastal wetlands.	No	Breeding: High Foraging: High	May occur in suitable nesting habitat in PD9.
Black skimmer (<i>Rynchops niger</i>)	CSC	Colony of permanent residents on the south end of San Diego Bay. Nests on gravel bars and sandy beaches; forages in shallow, calm waters.	No	Breeding: High Foraging: High	PD7 and PD9 provide known and suitable nesting habitat. Known to forage throughout San Diego Bay.
California least tern (<i>Sterna antillarum browni</i>)	FE/SE, FP	Nests on beaches and managed nesting sites; forages in shallow estuaries, lagoons, and along marine shores.	Yes	Breeding: Very Low Foraging: High	Known to forage throughout San Diego Bay.

Common Name (Scientific Name)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
Mammals					
Blue whale (<i>Balaenoptera musculus</i>)	FE	Blue whales are the largest animal on Earth and are most commonly found off the Southern California coast in summer months. They utilize baleen to filter krill, fish, squid, and other small organisms for food.	No	Very Low	May be observed in nearshore coastal waters off PD8. Highly unlikely in San Diego Bay.
Fin whale (<i>Balaenoptera physalus</i>)	FE	Fin whales utilize baleen to filter krill, fish, squid, and other marine life for foraging. The Fin whale is the second largest mammal on Earth.	No	Very Low	May be observed in nearshore coastal waters off PD8. Highly unlikely in San Diego Bay.
Humpback whale (<i>Megaptera novaengliae</i>)	FT (Mexico DPS)/FE (Central America DPS)	The humpback whale is a large baleen whale that is well known for its breaching behavior. There are two distinct population segments (DPS), the Mexico DPS, and Central American DPS, both of which utilize the waters off of Southern California for foraging.	No	Low	May be observed in nearshore waters off PD8. Highly unlikely in San Diego Bay.
Orca (<i>Orcinus orca</i>)	FE (Southern Resident DPS)	Orca is a large toothed whale in the dolphin family (Delphinidae). They commonly prey on fish and mammals, and studies suggest that certain populations specialize in hunting certain prey over other species. The Southern Resident DPS occurs off the coast of California, and targets chinook salmon as one of its primary food sources.	No	Very Low	May be observed in nearshore coastal waters off PD8. Unlikely in San Diego Bay.
Sperm whale (<i>Physeter microcephalus</i>)	FE	Sperm whales are the largest toothed whale and are known to dive to great depths in order to forage on prey, most notably, giant squid.	No	Very Low	May be observed in nearshore coastal waters off PD8. Unlikely in San Diego Bay.

Common Name (Scientific Name)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
California gray whale (<i>Eschrichtius robustus</i>)	MMPA	California gray whales migrate in fall from cooler northern Pacific feeding areas to embayments in Baja California, Mexico, for mating and calving. They return north in late winter/early spring.	No	Low	They may occasionally occur close enough to shore such that migrating animals pass through PD8. Gray whale occasionally enter the Bay accidentally while migrating.
California sea lion (<i>Zalophus californianus</i>)	MMPA	California sea lions haul out on natural (e.g., beaches) and human-made structures, bait barge, forage, raft, and mill throughout the entirety of the Bay. They typically forage offshore and have breeding rookeries on the Channel Islands.	No	High	They are common in the north Bay, central Bay, and offshore waters with high potential to occur in PD1, PD2, PD3, PD4, PD8, and PD10. They have moderate potential to occur in southern PD9.
Harbor seal (<i>Phoca vitulina</i>)	MMPA	Common haul out areas include the exposed ocean side of the Point Loma Peninsula, along shore south of Ballast Point, and a portion of the docks at Naval Base Point Loma. The exposed coast of the Point Loma Peninsula represents one of two mainland rookery sites in San Diego County. Pacific harbor seals and their pups have been documented in San Diego Bay, typically at the northern end of the Bay nearest Ballast Point.	No	High	Animals transiting along the coast will occasionally move through PD8. Given proximity to haul out sites and rookeries, animals may be seen swimming at PD1. They have a low potential to occur in all other planning districts.
Common dolphin (<i>Delphinus</i> spp.)	MMPA	Common dolphins have a widespread distribution and are often observed in Southern California nearshore environments. In the Bay, they are often observed in the north Bay from the San Diego Bay entrance to approximately Harbor Island.	No	Moderate	Animals in offshore waters often come close to shore and can be expected to transit through PD8. Within the Bay they are most likely to be observed in the main entrance channel with low potential

Common Name (<i>Scientific Name</i>)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
Bottlenose dolphin (<i>Tursiops truncatus</i>)	MMPA	Bottlenose dolphins have a widespread distribution and are often observed in Southern California nearshore environments. In the Bay, they are often observed in the north Bay from the San Diego Bay entrance to approximately Harbor Island.	No	Moderate	to occur in P1 and PD2. Potential occurrence in all other planning districts is very low. Animals in offshore waters often come close to shore and can be expected to transit through PD8. Within the Bay they are most likely to be observed in the main entrance channel with low potential to occur in PD1 and PD2. Potential occurrence in all other planning districts is very low.
Pacific white-sided dolphin (<i>Lagenorhynchus obliquidens</i>)		Pacific white-sided dolphin occur in the north Pacific and travel in groups of variable size.	No	Low	They have been documented in low numbers with minor occurrence in the north Bay entrance channel such that probability of occurrence in PD1 and PD2 is low, generally in the entrance channel. The likelihood of occurrence in PD3, PD4, PD7, PD9, and PD10, where open ocean is less accessible, is very low. They have a moderate potential to be observed in nearshore coastal waters off PD8 as they transit along the coast looking for prey.

Common Name (Scientific Name)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
Risso's dolphin (<i>Grampus griseus</i>)	MMPA	Risso's dolphin is a large dolphin species found in tropical and temperate oceans worldwide.	No	Very Low	May be observed in nearshore coastal waters off PD8. Highly unlikely in San Diego Bay.
Bryde's whale (<i>Balaenoptera brydei</i>)	MMPA	Bryde's whale is a large baleen whale that occurs worldwide in tropical, sub-tropical waters, and warm temperate waters. They have been observed in the Southern California Bight.	No	Very Low	Very low potential to be observed in nearshore coastal waters off PD8. Highly unlikely in San Diego Bay.
Minke whale (<i>Balaenoptera acutorostrata</i>)	MMPA	Minke whale are the smallest of the rorquals, which include blue, Bryde's, sei, and fin whales. They are widespread and generally found around the globe in the northern hemisphere. They occur in tropical to polar waters.	No	Very Low	May be observed in nearshore coastal waters off PD8. Highly unlikely in San Diego Bay.
Cuvier's beaked whale (<i>Ziphius cavirostris</i>)	MMPA	Cuvier's beaked whale occur worldwide with the exception of the polar regions. They dive deep for food and generally occur in offshore waters.	No	Very Low	May be observed in nearshore coastal waters off PD8. Likelihood is very low due to preference for deep offshore waters. Highly unlikely in San Diego Bay.
Northern right whale dolphin (<i>Lissodelphis borealis</i>)	MMPA	Northern right whale dolphins lack a dorsal fin and occur in large numbers in the north Pacific. They generally occur in deep offshore waters.	No	Very Low	May be observed in nearshore coastal waters off PD8. Likelihood is very low due to preference for deep offshore waters. Highly unlikely in San Diego Bay.
Dall's porpoise (<i>Phocoenoides dalli</i>)	MMPA	Dall's porpoise is a common north Pacific dolphin species and is likely the fastest swimming dolphin	No	Low	May be observed in nearshore coastal waters

Common Name (<i>Scientific Name</i>)	Sensitivity Code and Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
Fishes					
Steelhead (Southern California Distinct Population Segment) (<i>Oncorhynchus mykiss irideus</i>)	FE	Steelhead are the same species as rainbow trout but with an anadromous life cycle. The Southern California DPS occurs from the Santa Maria River to the Mexico Border.	No	Very Low	off PD8. Highly unlikely in San Diego Bay. Sweetwater River is within the Southern California DPS critical habitat. There are rainbow trout with native coastal steelhead genetics that are landlocked above dams and culverts within Sweetwater River. Marine fish could transit the Bay and the lower portions of the river. Recovery efforts may also re-establish populations in the future.

Source: CDFW 2017

m = meters; ft = feet; km = kilometers

Status:

Federal

FE – listed as endangered under the Federal Endangered Species Act.

FT – listed as threatened under the Federal Endangered Species Act.

MMPA – fully protected under the Marine Mammal Protection Act.

State

SE - listed as endangered under the California Endangered Species Act.

ST – listed as threatened under the California Endangered Species Act.

FP – fully protected species in California.

CSC – species of special concern in California.

Fish habitat and habitat areas of particular concern as managed under the MSA are discussed in this Program Environmental Impact Report (PEIR). The managed fish species with potential to occur in San Diego Bay are listed in the Coastal Pelagic Species Fishery Management Plan as amended (Pacific Fishery Management Council 2019); Pacific Coast Groundfish Fishery Management Plan for the California, Oregon, and Washington Groundfish Fishery as amended (Pacific Fishery Management Council 2020); and Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species as amended (Pacific Fishery Management Council 2018). These documents are incorporated by reference and are available for review at the weblinks provided in Chapter 9, *References*, of this PEIR.

Sensitive Wildlife Species Descriptions

Terrestrial

California Least Tern (*Sternula antillarum browni*)

The California least tern nests along the west coast of North America, from Baja California, Mexico, north to the San Francisco Bay area. California least terns are seasonal residents of San Diego Bay, typically arriving in mid- to late-April to nest at several colonies adjacent to the Bay and are generally present through mid-August, with September 15 marking the end of the season. California least terns may have two waves of nesting during this time period (Massey and Atwood 1981). They establish nesting colonies on sandy open space with little vegetation. Along the shores of San Diego Bay and south of the Imperial Beach Oceanfront, California least terns nest at multiple sites outside the planning districts discussed in this PEIR. California least terns actively forage for fish in the waters adjacent to nesting colonies and throughout San Diego Bay; foraging also occurs in open ocean waters and along the nearshore waters adjacent to beaches of Silver Strand and Imperial Beach.

Western Snowy Plover (*Charadrius alexandrinus nivosus*)

The western snowy plover is a sparrow-sized, white and tan colored shorebird with dark patches on either side of the neck, behind the eyes, and on the forehead. The coastal western snowy plover population is defined as those individuals that nest adjacent to or near tidal waters and includes all nesting colonies on the mainland coast, peninsulas, offshore islands, adjacent bays, and estuaries. The breeding range of the coastal population of the western snowy plover extends along coastal beaches from the southern portion of Washington State to southern Baja California, Mexico. The recognized breeding season of the western snowy plover normally extends from March 1 through September 15. In California, earliest nesting is sometimes observed in the first week of March, with nesting typically observed by the third week of March. Peak initiation of nesting is observed mid-April through mid-June (USFWS 2007). Western snowy plover nest along similar sandy flats and dunes as California least tern.

Ridgway's Rail (*Rallus longirostris levipes*)

Ridgway's rail is a resident in coastal wetlands in Southern California and northern Baja California, Mexico. The species is threatened primarily by loss and degradation of the freshwater, brackish, and salt marsh habitat in which it breeds. The largest population of this species occurs in the Tijuana River National Estuarine Research Reserve. The core breeding season for Ridgway's rails in San

Diego Bay has been reported to be mid-February through mid-June and into July (Vissman pers. comm.).

Belding's Savannah Sparrow (*Passerunculus sandwichensis beldingi*)

Belding's Savannah sparrow ranges along the Southern California coast from Santa Barbara County (Goleta Slough) in the north into Baja California, Mexico (near El Rosario) in the south. The species is unique in that it is a year-round resident of salt marshes and is reliant upon this habitat to meet all of its life cycle requirements. The species is threatened by loss and degradation of the salt marsh habitat in which it lives and breeds.

Black Skimmer (*Rynchops niger*)

Black skimmer breeds along the coast from San Francisco Bay south to San Diego Bay. The species requires large areas of bare earth sufficiently isolated from terrestrial predators and other disturbances (Shuford and Gardali 2008). The species is threatened by loss and degradation of the suitable nesting habitat.

Gull-billed Tern (*Gelochelidon nilotica*)

Gull-billed tern breeds along the coast of the Salton Sea and along the south San Diego Bay. The species nests on isolated portion of earthen levees with sparse vegetation (Shuford and Gardali 2008). The species is threatened by loss and degradation of the suitable nesting habitat.

Marine

Eastern Pacific Green Sea Turtle (*Chelonia mydas*)

The Eastern Pacific green sea turtle has been documented in San Diego Bay dating back to the 1800s (Stinson 1984). Green sea turtles in the Bay represent a local foraging population, commonly feeding on eelgrass, algae, and invertebrates. The thermal discharge from the former South Bay Power Plant was generally believed to attract green sea turtles. The warm water effluent associated with the once-through cooling of the power plant created a warm water environment that researchers attributed to the abundance of green sea turtles in south San Diego Bay (Stinson 1984; McDonald et al. 1994; Duke Energy South Bay, LLC 2004). The decommissioning of the South Bay Power Plant has also been attributed to an increased number of more northern observations (Seminoff quoted in Brody 2013). Green sea turtle home ranges within San Diego Bay increased in size following the closure of the South Bay Power Plant; however, home ranges have remained predominantly south of Sweetwater River (SPAWAR & NAVFAC 2016). This is likely due in part to the long residence time of south San Diego Bay waters, which tend to be warmer than the rest of the Bay regardless of the presence of additional thermal input.

The green sea turtle foraging population, as well as other regional foraging populations, is part of the Mexican breeding population (Eguchi et al. 2010). The nesting sites for the green sea turtle foraging population may include the Revillagigedo Islands, Tres Maria Islands, and mainland Mexico (Dutton 2003 as cited in Eguchi et al. 2010). Turtles have been tracked between the south Bay and the Revillagigedo Islands (SPAWAR & NAVFAC 2016). The potential to observe turtles in more northern portions of San Diego Bay and in offshore environments increases in summer months with warmer water.

Marine Mammals – Pinnipeds

Pinnipeds are flipper-footed marine mammals that spend a portion of their time out of the water. Pinnipeds typically spend a portion of their day on dry land resting, sleeping, mating (in season), and giving birth (in season), a behavior called *hauling out*. Choice of haul out sites is likely related to ease of access, proximity to food resources, protection from waves, and protection from predators. Pinnipeds are documented to occupy natural settings: sandy beaches, rocky beaches, boulder beaches, rocks and pinnacles, mud flats, reefs, fallen trees, and rock shelves. California sea lion (*Zalophus californianus*) and occasionally Pacific harbor seal (*Phoca vitulina*) occupy human-made structures (e.g., docks, buoys, landings, breakwaters, boats, bait barges, and fish ladders). Potential disturbance occurs when these haul out locations overlap with urbanized areas.

In San Diego Bay, both California sea lion and Pacific harbor seal haul out on natural (e.g., beaches) and human-made structures, and forage, raft, and mill throughout the entirety of the Bay. California sea lion and harbor seal are not typically found in the same haul out locations. The California sea lion is able to haul out on steep, rocky habitat because it can rotate its pelvis to use all four limbs to walk. Harbor seal cannot rotate the pelvis and must move on land by undulating the body (NPS 2016).

Within San Diego Bay, California sea lion is the dominant and most numerous pinniped observed, whereas harbor seal is more elusive and found in lower numbers. California sea lion haul out in large numbers at the two bait barges that are located near the entrance to San Diego Bay in Point Loma. They also haul out individually or in small groups on buoys, docks, and boats throughout San Diego Bay but are most prevalent in northern portions of the Bay. In addition to the animals that haul out on the buoys, docks, and boats, California sea lion rest in moderate numbers on the rock riprap that forms Zuniga Jetty at the entrance to San Diego Bay (Merkel & Associates 2008).

On the exposed ocean side of the Point Loma Peninsula, harbor seals have established one of two mainland hauling and rookery sites in San Diego County. As a result, Pacific harbor seals and their pups have been documented in San Diego Bay, mostly at the northern end of the Bay near Ballast Point. The harbor seals use a portion of the docks in a restricted area adjacent to the Naval Base Point Loma Submarine docking station to haul out. In addition, harbor seals have been observed to haul out along the shore south of Ballast Point (NAVFACSW 2014).

Other pinnipeds seen in the Bay include northern elephant seal (*Mirounga angustirostris*) and Steller sea lion (*Eumetopias jubatus*). These are rare sightings, and, in the case of elephant seals, they are typically undernourished juveniles that strand on the shore within the Bay. Steller sea lions have been recorded hauled out on the bait barge and navy docks, and swimming in the Bay (NAVFACSW 2015).

Marine Mammals – Cetaceans

Cetaceans are a group of marine mammals that consists of whales, dolphins, and porpoises. A Southern California Bight aerial survey of marine mammals was performed over 5 years between 2008 and 2013 and identified the cetaceans provided in Table 4.3-5 (Jefferson et al. 2014). Of the cetaceans identified, only the short-beaked common dolphin, long-beaked common dolphin, Risso's dolphin, bottlenose dolphin, fin whale, and gray whale were observed often enough to generate a population estimate within the Southern California Bight.

Table 4.3-5. Southern California Bight Aerial Marine Mammal Survey Results (2008–2013)

Common Name	Scientific Name	Mean Population Estimate	
		Warm Season	Cold Season
Short-beaked common dolphin	<i>Delphinus delphis</i>	8,520 (CV=54%)	15,955 (CV=51%)
Long-beaked common dolphin	<i>Delphinus capensis</i>	3,314 (CV=54%)	6,440 (51%)
Risso's dolphin	<i>Grampus griseus</i>	1,450 (CV=66%)	993 (CV=51%)
Bottlenose dolphin	<i>Tursiops truncatus</i>	496 (CV=87%)	290 (CV=61%)
Fin whale (E)	<i>Balaenoptera physalus</i>	137 (CV=49%)	140 (CV=33%)
Gray whale	<i>Eschrichtius robustus</i>	6 (CV=13%)	221 (CV=53%)
Blue whale (E)	<i>Balaenoptera musculus</i>	Too few sightings to estimate	
Bryde's whale	<i>Balaenoptera brydei</i>	Too few sightings to estimate	
Minke whale	<i>Balaenoptera acutorostrata</i>	Too few sightings to estimate	
Humpback whale (T/E) ¹	<i>Megaptera novaeangliae</i>	Too few sightings to estimate	
Sperm whale (E)	<i>Physeter macrocephalus</i>	Too few sightings to estimate	
Cuvier's beaked whale	<i>Ziphius cavirostris</i>	Too few sightings to estimate	
Orca (E) ²	<i>Orcinus orca</i>	Too few sightings to estimate	
Pacific white-sided dolphin	<i>Lagenorhynchus obliquidens</i>	Too few sightings to estimate	
Northern right whale dolphin	<i>Lissodelphis borealis</i>	Too few sightings to estimate	
Dall's porpoise	<i>Phocoenoides dalli</i>	Too few sightings to estimate	

E= endangered; T = threatened; CV = Coefficient of Variation

¹ Mexico DPS (Threatened), Central American DPS (Endangered)

² Southern Resident DPS Endangered

The U.S. Navy identified the same six commonly identified species from Table 4.3-5, as well as the Pacific white-sided dolphin, as having potential to occur in San Diego Bay (NAVFACSW 2016). The U.S. Navy obtained an incidental harassment authorization and identified all possible species with potential to occur at the fuel pier (P-151) project area at Naval Base Point Loma.

Common and bottlenose dolphins have widespread distributions and are often observed in Southern California nearshore environments. They are also often observed in the north Bay from the San Diego Bay entrance to approximately Harbor Island (Mooney personal observation; also see NAVFACSW 2016). Animals are often observed either swimming alongshore or bow-riding vessels entering and leaving the Bay.

California gray whales are commonly observed along the California coast and are often observed close to shore. The gray whale performs annual migrations from cooler northern Pacific feeding areas to embayments in Baja California, Mexico, for mating and calving. Gray whales migrate south along the San Diego coast in fall and early winter and can be observed on their northbound migration in later winter and early spring. Animals have been occasionally observed entering San Diego Bay (Mooney personal observation; NAVFACSW 2016); these rare events are likely accidental. Other whale species are found in the Southern California Bight, as noted in Table 4.3-5, but occur less frequently and many are typically observed farther offshore. However, they all have the potential to be occasionally observed from PD8.

4.3.2.7 Planning District Settings

The following describes the biological resources setting for each of the planning districts. Each description includes habitats present and potential sensitive species that may occur within the planning district.

Planning District 1: Shelter Island

The terrestrial portion of PD1 is devoid of natural vegetation communities and contains very little open space and habitat for native vegetation and wildlife. Habitats include upland, sandy beaches, and urban/developed. Open space within the planning district is limited to parks with ornamental trees, rock rip-rap, and small beach areas. Due to the routine landscaping and frequent human visitation, there is no potential for sensitive vegetation species to occur within PD1. Buildings and palm trees provide low potential for roosting habitat for sensitive species. Potential nesting habitat for special-status bird species and birds protected under the Migratory Bird Treaty Act (MBTA) occur within trees and shrubs. Nearshore open water habitat provides foraging habitat for bird species, such as California least tern, California brown pelican, osprey, and other species that prey on fish.

The marine biology of PD1 is influenced by its proximity to open ocean water. The first 3 to 4 miles within the entrance of the Bay can be described as the “Marine Region” (NAVFACSW and District 2013). This designation represents the proximity and exchange of open ocean water with northern San Diego Bay. The close connection between PD1 and open ocean waters means that conditions are favorable for some coastal aquatic species. For instance, fish species such as garibaldi (*Hypsypops rubicundus*) can be found in association with rock, such as riprap, in PD1 (Mooney personal observation). Garibaldi is a coastal fish species typically found in rocky coastal waters and kelp forests. The planning district also supports more complex algal species on rocks and dock floats relative to other areas within San Diego Bay. However, the dominant kelp species on dock floats in PD1 is the exotic alga, wakame (*Undaria pinnatifida*). The presence of these species indicates the oceanic influence within the Marine Region and PD1 in general.

The marine habitats within PD1 generally include sandy beaches and shallow subtidal, rocky (riprap) intertidal, vertical headwall intertidal and subtidal, boat launch ramp, intertidal and subtidal portions of pilings, subtidal portions of docks, mudflats, and soft-bottom generally composed of mud. Hard structures such as rocky riprap, concrete piles, and concrete walls generally support species similar to nearby rocky habitats. These include barnacles (*Balanus glandula* and *Chthamulus* sp.), limpets, oysters (*Ostrea lurida*), and spiny lobster (*Panulirus interruptus*).

The primary biologically important habitat associated with the soft-bottom in PD1 and throughout San Diego Bay is eelgrass. Eelgrass beds grow to greater depths in PD1 relative to southern portions of San Diego Bay due to the oceanic influence within the Marine Region and the improved water clarity and quality that results from regular tidal exchange. Soft bottom sandy beaches occur at Kellogg Beach (opposite of Harbor Police dock) and Shoreline Park.

Planning District 2: Harbor Island

Open space associated with PD2 is composed of landscaped parks and rock riprap within the intertidal zone. Trees and buildings may provide low potential roosting habitat for sensitive species. Ornamental trees within the park area offer potential nesting habitat for sensitive bird species and

birds protected under the MBTA, and nearshore open water habitat provides foraging potential for piscivorous bird species. The San Diego International Airport, which is outside the proposed PMPU area discussed in this PEIR, contains an annual breeding colony of California least tern, which forages in the Bay. Peregrine falcon, among other raptor species, have also been observed preying on California least tern at the airport (Patton 2015).

The marine portion of PD2 includes the waters immediately around Harbor Island and extends from the western end of Harbor Island to the eastern edge of Convair Lagoon. The marine biology of PD2 is influenced by its proximity to open ocean water. Like PD1, PD2 is within the Marine Region of San Diego Bay (NAVFACTSW and District 2013); this planning district receives substantial tidal exchange with lower residence times than more interior areas of the Bay.

Most of the shoreline within PD2 consists of rock riprap revetment. This provides hard substrate for attachment by intertidal and subtidal invertebrates and algae. There is a small beach area available to the public via Spanish Landing Park. The revetment in PD2 supports hard-bottom intertidal organisms. Occasional barnacles (*Balanus glandula* and *Chthamalus* sp.), limpets, oysters (*Ostrea lurida*), and the green alga *Ulva intestinalis* were observed during a recent survey of the shoreline adjacent to the Harbor Island West Marina (MTS 82018). The tow of the revetment had sparse occurrence of the invasive alga *Sargassum muticum*, and spiny lobster (*Panulirus interruptus*) was observed in crevices. In addition to lobster, the voids between rocks provide shelter for small fish and crabs.

Planning District 2 is generally shallow with no deep subtidal habitat. The shallow water allows for substantial eelgrass cover. Eelgrass growth is notable along the long stretch of shallow water habitat adjacent to Spanish Landing Park in the west basin between Harbor Island West and the park. This area provides a large expanse of shallow water habitat that is not covered by dock structures and is therefore more likely to support persistent stands of eelgrass. Eelgrass is also persistent along the 1-mile stretch on the south/Bay side of Harbor Island. There is also substantial eelgrass cover in Convair Lagoon, which is a shallow cove at the eastern end of PD2 that was capped as part of a sediment remediation project. Similar to PD1, the location of PD2 within the Marine Region means water clarity is generally greater than more southerly portions of the Bay, and therefore, eelgrass grows to greater depths in these areas.

Planning District 3: Embarcadero

The majority of the habitat within PD3 is urban/developed with landscaped lawns and ornamental trees. Buildings and palm trees on site provide low potential for sensitive species roosting within the planning district, but other large trees provide potential nesting habitat for birds protected under the MBTA and Fish and Game Code. There is potential foraging for raptors, including peregrine falcon, due to the high volume of prey species that utilize the terrestrial habitat, as well as piscivorous birds such as osprey, California least tern, and California brown pelican, which use adjacent open water areas for foraging and periodically rest along riprap or on near-water structures.

The marine portion of PD3 is composed of the shoreline, basins, and marinas along the Downtown waterfront and are influenced by a combination of dredging and tidal exchange. The narrow width of the Bay toward the southern end of PD3 leads to shallow water habitats along the shore, quickly giving way to deep water. Therefore, much of the shoreline areas along the navigation channel are steeply sloped. Additionally, in the south, the narrowing of San Diego Bay leads to significant tidal

currents. Basins such as the Laurel Street mooring and the former Campbell Shipyard are dredged deeper than many of the nearby recreational marinas. The increased depth results in less light and therefore lower occurrence of primary producers such as eelgrass.

Most of the marine portion of the planning district is composed of mud bottom that is typical of much of the non-vegetated portions of San Diego Bay. A survey at Fifth Avenue Landing Marina (MTS 2017) found that common motile invertebrates included California aglaja (*Navanax inermis*), cloudy bubble snails (*Bulla gouldiana*), and lobster. Lobster were generally associated with human-made structures (e.g., concrete, rock, tires). Common fish species over unvegetated bottom include round stingrays (*Urobatis hutchingsi*), diamond turbot (*Hypsopsetta uttulate*), California halibut (*Paralichthys californicus*), barred sand bass (*Paralabrax nebulifer*), and spotted sand bass (*P. maculatofaciatus*). Signs of burrowing invertebrates are numerous within the mud bottom, and the tube-dwelling anemone (*Pachycerianthus fibriatus*) is common.

Most of the eelgrass that occurs in PD3 is present in narrow beds along the shoreline and over a 1.5-acre shallow water habitat site at the former Campbell Shipyard, which was constructed to support eelgrass as part of a remediation project and create a bank for excess eelgrass beyond the mitigation requirements.

Planning District 4: Working Waterfront

This planning district contains urban/developed and upland habitats with minimal open space occurring in Cesar Chavez Park, which is landscaped. Due to the high amount of human visitation and landscaping, PD4 does not contain habitat for sensitive plant species. Trees and human-made structures within the park provide potential nesting habitat for birds protected under the MBTA and Fish and Game Code.

The marine portion of PD4 includes the waters immediately adjacent to the shore between the Tenth Avenue Marine Terminal (TAMT) and Chollas Creek. The primary uses along the waterfront are industrial with three shipyards located between TAMT and Chollas Creek.

The wharves around the TAMT are dredged to -41 feet MLLW, and the vertical seawall quickly gives way to deep subtidal habitat as a result. The shipyards to the south generally have shallow and gradually deepening bottom, moving away from shore for the first 200 to 300 feet, and then quickly deepen to dredged depths of 40 feet or more. The shoreline within PD4 is a mixture of rock riprap revetment and concrete seawall. This provides hard substrate for attachment by intertidal and subtidal invertebrates and algae. Planning District 4 supports notably fewer hard-bottom intertidal organisms relative to more northern planning districts. However, lobster are abundant and associated with pilings and revetment. They are also notably large, which is likely due to inaccessibility by the public (Mooney personal observation). The numerous piers likely attract fish such as pile perch and other structure-associated species. The mooring dolphins within the shipyards have been observed to attract white seabass during past environmental surveys (Mooney personal observation).

Eelgrass is less abundant in PD4 compared to other planning districts due to dredged depths and reduced area of shallow water. The shallow water bench along the shoreline does support eelgrass where it is not shaded by piers or other structures.

Planning District 7: South Bay

Habitat types present in PD7 include intertidal flats, salt flats, coastal saltmarsh, and open water. Public use of these areas would be infrequent, and there is a high likelihood that both sensitive plants and wildlife species occur within this planning district. Although CNDDDB results and reconnaissance surveys did not indicate the presence of sensitive plant species, the available marsh habitat and limited disturbance give PD7 a high likelihood that sensitive species may occur. Sensitive wildlife species such as Belding's Savannah sparrow, California least tern, and western snowy plover have a high potential to occur within the planning district.

The low intertidal areas below the intertidal flats generally support substantial amounts of eelgrass. Additionally, the eelgrass extends to the shallow subtidal as well. There are no moderately deep or deep subtidal areas in PD7. The water area supports schooling fish such as slough anchovy, northern anchovy, and topsmelt. These fish species generally occur as juveniles (Mooney personal observation). Round stingray is abundant as well.

Planning District 8: Imperial Beach Oceanfront

This planning district includes two parks, which contain landscaped lawns and a number of trees. There is little to no potential for any sensitive plants or wildlife due to the predominance of disturbed habitat; however, birds protected under the MBTA and Fish and Game Code may nest in some of the trees within the planning district.

The northwest portion of PD8 supports intermittent stands of giant kelp. The seafloor along Imperial Beach is generally a mixture of sand over cobble and small boulders. Because of the size of the rocks, they are subject to movement during storms. This is particularly true when species such as giant kelp colonize the substrate. Kelp makes the boulders more buoyant such that they can be transported or moved, which can result in kelp damage. This process, along with sand movement during storm events, drives the intermittent nature of kelp beds in the planning district. This is the only planning district that does not contain eelgrass.

Compared to the other planning districts, PD8 has the highest potential for observing marine mammals. Given that this planning district contains open coastal water, it is possible that all of the marine mammals identified in Table 4.3-5 could be observed. However, sightings of most species would be rare.

Planning District 9: Silver Strand

Habitats present include coastal saltmarsh, intertidal flats, upland transition, upland, urban/developed, and coastal dune. The planning district contains dune habitat for sensitive plant species. ICF biologists observed red-sand verbena (*Abronia maritima*), Nuttall's lotus (*Acmispon prostrates*), and short-lobed broomrape (*Orobancha parishii* ssp. *brachyloba*) during reconnaissance surveys. This planning district also has a high potential for other dune species that were not observed in the field during the reconnaissance level survey.

The water area within PD9 is generally shallow and supports significant eelgrass beds in the shallow waters along the northern and southern shorelines. In the central portion of the planning district, the channels within the Coronado Cays (which are developed with shoreline residences, a resort, and boat slips) support eelgrass beds along the seawall where shading and water quality does not restrict growth.

Planning District 10: Coronado Bayfront

This planning district contains urban/developed, sandy beach, upland, and upland transition habitats, all of which are heavily disturbed. As such, sensitive plants and wildlife are unlikely to occur within PD10, although there are suitable trees and structures present within the golf course and park areas, which bird species may find suitable for nesting and roosting.

The intertidal shoreline is a mixture of seawall, sandy beach, and riprap. The riprap is often at mid- to high-intertidal elevations with sandy beach or mudflat at the toe of the riprap. As such, the riprap generally supports modest numbers of oyster and barnacles with various crab species finding refuge amongst the crevices in the riprap. The sand and mud intertidal habitat support multiple species of shorebirds that utilize the low intertidal to forage when the tide is out.

Eelgrass is abundant in the shallow subtidal areas within PD10. Eelgrass can be found fringing the shoreline in Glorietta Bay and also extends farther into San Diego Bay on the shallow bench that extends off of Coronado Tidelands Park just north of the Coronado Bridge. There are also shallow areas of eelgrass habitat towards the mouth of San Diego Bay that are divided to the north and south by the Coronado Bridge. Eelgrass is also abundant along the First Avenue shoreline. Beyond the vegetated areas, the bottom is generally muddy and supports the common fishes and invertebrates associated with most of the Bay.

4.3.3 Laws, Regulations, Plans, and Policies

4.3.3.1 Federal

Coastal Zone Management Act of 1972

The U.S. Congress recognized the importance of meeting the challenge of continued growth in the coastal zone by passing the Coastal Zone Management Act in 1972. The act, administered by NOAA's Office of Ocean and Coastal Resource Management, provides for management of the nation's coastal resources and balances economic development with environmental conservation.

The Coastal Zone Management Act outlines two national programs. The National Coastal Zone Management Program includes 34 coastal programs that aim to balance competing water and land issues in the coastal zone. The National Estuarine Research Reserve System creates field laboratories that provide a greater understanding of estuaries and how humans affect them. The overall program objectives of the act are to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

The Coastal Zone Management Act ensures that development projects in coastal areas are designed and sited in a manner that is consistent with coastal zone land uses, maximizes public health and safety, and ensures that biological resources (e.g., wetlands, estuaries, beaches, and fish and wildlife and their habitat) within the coastal zone are protected. The California Coastal Commission enforces the Coastal Zone Management Act by certifying that any proposed project is consistent with the California Coastal Act of 1976 (as amended). The enforceable policies of the Coastal Zone Management Act are found in Chapter 3 of the California Coastal Act, which is discussed further in Section 4.3.3.2, *State*, below.

Rivers and Harbors Act (Section 10)

Pursuant to Section 10 of the Rivers and Harbors Act, the U.S. Army Corps of Engineers (USACE) is authorized to regulate any activity within or over any navigable water of the United States. Rivers and Harbors Act Section 10 jurisdiction is defined as “those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use, to transport interstate or foreign commerce” (33 Code of Federal Regulations 322). The San Diego Bay and coastal waters within the proposed PMPU area are considered traditional navigable water regulated under Section 10 of the Rivers and Harbors Act; therefore, any future work activities proposed within or over any navigable waters would require Section 10 compliance and coordination with USACE.

Endangered Species Act of 1973

Species listed as endangered and/or threatened by the USFWS are protected under Section 9 of the Federal ESA, which forbids any person to “take” an endangered or threatened species. Take is defined in Section 3 of the act as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The U.S. Supreme Court ruled in 1995 that the term “harm” includes destruction or modification of habitat. Sections 7 and 10 of the Act may authorize “incidental take” for an otherwise lawful activity (a development project, for example) if it is determined that the activity would not jeopardize survival or recovery of the species. Section 7 applies to projects where a Federally listed species is present and there is a Federal nexus, such as a Federal CWA Section 404 permit (e.g., impacts on waters of the United States [WoUS]) that is required. Section 10, requiring an incidental take permit, applies when a Federally listed species is present, but there is no Federal nexus.

Magnuson-Stevens Fishery Management and Conservation Act, as amended 1996 (Public Law 104-267)

Federal agencies must consult with NOAA Fisheries on actions that may adversely affect essential fish habitat (EFH). EFH is defined as those “waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” NOAA Fisheries encourages streamlining the consultation process using review procedures under the National Environmental Policy Act, Fish and Wildlife Coordination Act, the CWA, and/or the Federal ESA provided that documents meet requirements for EFH assessments under Section 600.920(g). EFH assessments must include (1) a description of the proposed action, (2) an analysis of effects, including cumulative effects, (3) the Federal agency’s views regarding the effects of the action on EFH, and (4) proposed mitigation, if applicable.

Marine Mammal Protection Act of 1972

The Marine Mammal Protection Act (MMPA) of 1972 prohibits, with certain exceptions, the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States. Congress passed the MMPA based on the following findings and policies: (1) some marine mammal species or stocks may be in danger of extinction or depletion as a result of human activities, (2) these species or stocks must not be permitted to fall below their optimum sustainable population level (depleted), (3) measures should be taken to replenish these species or stocks, (4) there is inadequate knowledge of the ecology and

population dynamics, and (5) marine mammals have proven to be resources of great international significance.

The MMPA was amended substantially in 1994 to provide for: (1) certain exceptions to the take prohibitions, such as for Alaska Native subsistence, and for permits and authorizations for scientific research; (2) a program to authorize and control the taking of marine mammals incidental to commercial fishing operations; (3) preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction; and (4) studies of pinniped-fishery interactions. Additionally, under the 1994 amendments to the MMPA, harassment is statutorily defined as any act of pursuit, torment, or annoyance that:

- Has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or
- Has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavior patterns, including, but not limited to migration, breathing, nursing, breeding, feeding, or sheltering but which does not have the potential to injure a marine mammal or marine mammal stock in the wild (Level B harassment).

NOAA Fisheries and USFWS administer the MMPA. The proposed PMPU must be analyzed to ensure that marine mammals protected under the MMPA would not be harassed or injured as a result of future activities in or adjacent to San Diego Bay. Any future project activities that may result in Level A or B harassment, injury, or mortality would require consultation with NOAA Fisheries and USFWS under the MMPA.

Migratory Bird Treaty Act

The MBTA was enacted in 1918 to prohibit the killing or transport of native migratory birds, or any part, nest, or egg of any such bird, unless allowed by another regulation adopted in accordance with the MBTA. A list of migratory bird species that are protected by the MBTA is maintained by USFWS, which regulates most aspects of the taking, possession, transportation, sale, purchase, barter, exportation, and importation of migratory birds. Under the MBTA, “take” means to kill, directly harm, or destroy individuals, eggs, or nests or to otherwise cause failure of an ongoing nesting effort. USFWS does not issue permits for “incidental take” of migratory birds that results from otherwise lawful activities such as construction of development projects.

Clean Water Act

The Federal Water Pollution Control Act Amendments of 1972, commonly known as the Clean Water Act (33 United States Code [USC] 1251–1376), as amended by the Water Quality Act of 1987, is the major Federal legislation governing water quality. The purpose of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Discharges into WoUS are regulated under CWA Section 404. WoUS include: (1) all navigable waters (including all waters subject to the ebb and flow of the tide); (2) all interstate waters and wetlands; (3) all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, or natural ponds; (4) all impoundments of waters mentioned above; (5) all tributaries to waters mentioned above; (6) the territorial seas; and (7) all wetlands adjacent to waters mentioned above. Important applicable sections of the CWA are discussed below.

- **Section 401** requires an applicant for any Federal permit that proposes an activity that may result in a discharge into WoUS (as defined by the navigable water protection rule) to obtain certification from the State that the discharge will comply with other provisions of the CWA. Certification is provided by the respective Regional Water Quality Control Board (RWQCB). A Section 401 certification from the San Diego RWQCB would be required for future projects if a Section 404 permit and/or Rivers and Harbor Act (Section 10) permit are required.
- **Section 404** provides for USACE issuance of permits for discharge of dredged or fill material into WoUS by Permits typically include conditions to minimize impacts on water quality. Common conditions include: (1) USACE review and approval of sediment quality analysis before dredging; (2) a detailed pre- and post-construction monitoring plan that includes disposal site monitoring; and (3) requiring compensation for loss of WoUS.

California Eelgrass Mitigation Policy

The National Marine Fisheries Service (NMFS) is an office of the NOAA and is responsible for the stewardship of the nation's ocean resources and their habitat. NMFS developed the California Eelgrass Mitigation Policy (CEMP) in order to establish and support a goal of protecting eelgrass and its habitat functions (NMFS 2014). The CEMP includes guidance on defining eelgrass habitat, surveying, mapping, assessing impacts, avoiding and minimizing impacts on eelgrass, and mitigation options. Avoidance and minimization measures included within the CEMP relate to turbidity, shading, circulation, and nutrient and sediment loading impacts. Mitigation options include comprehensive management plans, in-kind mitigation, mitigation banks and in-lieu-fee programs, and out-of-kind mitigation.

NMFS has provided this policy to other State and Federal agencies, including the California Department of Fish and Wildlife (CDFW), as guidance for handling project-related impacts on eelgrass habitat.

4.3.3.2 State

California Coastal Act of 1976

The California Coastal Act of 1976 recognizes California ports, harbors, and coastline beaches as primary economic and coastal resources and as essential elements of the national maritime industry. Decisions to undertake specific development projects, where feasible, are to be based on consideration of alternative locations and designs in order to minimize any adverse environmental impacts. The California Coastal Act is implemented by the California Coastal Commission (CCC). The District's currently adopted PMP was certified by CCC on January 21, 1981, and subsequently amended. The proposed PMPU involves an update to the PMP and will require certification from CCC. Upon certification of the proposed PMPU, the District would be authorized to issue Coastal Development Permits for projects within its permitting jurisdiction.

California Endangered Species Act; Fully Protected Species

The CESA establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that affect

both a State- and Federally listed species, compliance with the Federal ESA will satisfy the CESA if the CDFW determines that the Federal incidental take authorization is consistent with the CESA under California Fish and Game Code Section 2080.1. For projects that would result in a take of a State-only listed species, the project proponent must apply for a take permit under Section 2081(b).

Also, California Fish and Game Code Sections 3511, 4700, 5050, and 5515 prohibit take or possession of fully protected species. Incidental take of fully protected species may be authorized only under an approved Natural Communities Conservation Plan (NCCP).

California Fish and Game Code

Other sections of the California Fish and Game Code establish the Fish and Game Commission, as authorized by Article IV, Section 20, of the Constitution of the State of California. The Fish and Game Commission is responsible, under the provisions of Sections 200–221, for regulating the take of fish and game, not including the taking, processing, or use of fish, mollusks, crustaceans, kelp, or other aquatic plants for commercial purposes. However, the Fish and Game Commission does regulate aspects of commercial fishing, including fish reduction; shellfish cultivation; take of herring, lobster, sea urchins, and abalone; kelp leases; leases of State water bottoms for oyster allotments; aquaculture operations; and other activities. These resource protection responsibilities involve the setting of recreational and commercial fishing seasons, bag and size limits, and methods and areas of take, as well as prescribe the terms and conditions under which permits or licenses may be issued or revoked by CDFW. The Fish and Game Commission also oversees the establishment of wildlife areas and ecological reserves and regulates their use and sets policy for CDFW.

Sections 3503, 3503.5, 3505, 3800, and 3801.6 of the Fish and Game Code protect all native birds, birds of prey, and all nongame birds, including their eggs and nests, that are not already listed as fully protected and that are naturally present within the state. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (e.g., hawks, owls, eagles, falcons), including their nests or eggs.

CDFW is the lead State agency that manages native fish, wildlife, plant species, and natural communities for their ecological value and their benefits to people. CDFW oversees the management of marine species through several programs, some in coordination with NMFS and other agencies.

The CEMP is administered by NMFS and CDFW. The effects of a project on any surrounding eelgrass beds and any compensatory mitigation would be addressed under the CEMP.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is the California equivalent of the Federal CWA. It provides for statewide coordination of water quality regulations through the establishment of the State Water Resources Control Board (SWRCB) and nine separate RWQCBs that oversee water quality on a day-to-day basis at the regional/local level. The RWQCB regulates actions that would involve “discharging waste, or proposing to discharge waste, within any region that could affect the water of the state” (Water Code Section 13260(a)), pursuant to provisions of the Porter-Cologne Act. Waters of the State (WoS) are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code Section 13050 (e)).

The RWQCB also regulates WoS under Section 401 of the CWA, which requires states to certify that Federally-authorized activities comply with State water quality standards. A Water Quality

Certification or a waiver must be obtained from the RWQCB if an activity requiring a Section 404 permit would affect WoS. In addition, pursuant to the Porter-Cologne Water Quality Control Act, the RWQCB issues waste discharge requirements for discharges to WoS for fill of wetlands and other waters that are not regulated by Section 404 of the Federal CWA.

Proposed projects must be analyzed to determine if they will result in discharges to WoS. Discharges subject to Section 404 regulation may require a Section 401 certification, and other discharges to WoS may require waste discharge requirements.

California Marine Invasive Species Act

The California Marine Invasive Species Act of 2003 renewed and expanded on the Ballast Water Management for Control of Nonindigenous Species Act of 1999 to address the threats posed by the introduction of nonindigenous species. The law charged the California State Lands Commission with oversight and administration of the State's program to prevent or minimize the release of nonindigenous species from vessels that are 300 gross registered tons and above. To advance this goal, the commission's Marine Invasive Species Program uses an inclusive, multi-faceted approach to develop sound, science-based policies in consultation with technical experts and stakeholders; track and analyze ballast water and vessel biofouling management practices of the California commercial fleet; enforce laws and regulations to prevent introductions; and facilitate outreach to promote information exchange among scientists, legislators, regulators, and other stakeholders.

Both the U.S. Coast Guard (Ballast Water Management) and Environmental Protection Agency (EPA) (Vessel General Permit) regulate ballast water discharges, and both agencies currently require ballast water exchange for most vessels operating in U.S. waters. In addition, California requires ballast water exchange on coastwise voyages (e.g., between Los Angeles and Oakland). However, at present, the discharge standards in California are more stringent than Federal regulations. In accordance with governing statutes and regulations, vessels have four options to comply with California's performance standards: (1) retention of all ballast water on board, (2) use of potable water as an alternative ballast water management method, (3) discharge to a shore-based ballast water reception and treatment facility, and (4) treatment of all ballast prior to discharge by a shipboard ballast water treatment system. Performance standards for ballast water discharge are: (1) no detectable living organisms greater than 50 microns in minimum dimension, (2) fewer than 0.01 living organism per milliliter of organisms 10–50 microns in minimum dimension, and (3) multiple standards for bacteria and viruses. The performance standards for vessels with ballast water capacities of 1,500–5,000 metric tons became applicable in 2016, while standards for vessels with capacities of fewer than 1,500 metric tons and greater than 5,000 metric tons will apply in 2018.

4.3.3.3 Local

San Diego Bay Integrated Natural Resources Management Plan

The San Diego Bay INRMP is a long-term strategy sponsored by two of the major managers of San Diego Bay: the U.S. Navy and the District. Its intent is to provide direction for the good stewardship that natural resources require while also supporting the ability of the Navy and District to meet their missions and continue functioning within the Bay. The core strategies of the plan are to (1) manage and restore habitats, populations, and ecosystem processes; (2) plan and coordinate projects and

activities so that they are compatible with natural resources; (3) improve information sharing, coordination, and dissemination; (4) conduct research and long-term monitoring that supports decision-making; and (5) put in place a Stakeholder's Committee and Focus Subcommittees for collaborative, ecosystem-based problem-solving in pursuit of the goal and objectives.

The proposed PMPU specifically references many District environmental initiatives including the INRMP under the Ecology Element. Other examples of District environmental programs and initiatives include the (1) Jurisdictional Runoff Management Program, (2) Regional Harbor Monitoring Program, (3) Copper Reduction Program, (4) Marine Clean Harbor Strategy, (5) Transboundary Pollution Resolution, and (6) Climate Action Plan. Each of these initiatives aims to provide for a cleaner Bay and ocean, as well as to manage the Bay and ocean to protect terrestrial and marine biological resources. This highlights the District's focus on maintaining and improving habitats, resources, and ecosystem processes. In many cases, District's policies and initiatives act in concert with the understanding of San Diego Bay resources in the INRMP to ensure protection of natural resources and prevention of impacts associated with development under the proposed PMPU.

Port of San Diego Environmental Mitigation Property (BPC Policy No. 735)

Board of Port Commissioners (BPC) Policy 735 establishes a policy for the allocation of environmental mitigation property within District Tidelands. Environmental mitigation property refers to land, water area, natural or constructed habitats, credit for the removal of shading over open water, or other assets, held in trust by the District and that could be used to offset the environmental impacts of projects. The District recognizes the demand for mitigation property within Tidelands for capital development projects and major maintenance pursuant to the District's land-use obligation (as defined in Section 4 of the San Diego Unified Port District Act). The District also recognizes that the demand for environmental mitigation property for non-District funded projects is increasing. It is the policy of the District that property suitable for mitigation, which is held in trust by the District, will be retained for District-funded capital development and major maintenance projects. Due to the limited area of mitigation property available to the District, each project requiring mitigation shall be evaluated through an administrative procedure as described in BPC Policy No. 735 to ensure that environmental mitigation property is only used for the most appropriate project. Further, unused mitigation land and new mitigation opportunities on District Tidelands that are not encumbered by a project will be under the control of the District and will be added to the District's accounting of available mitigation property. New mitigation land or credits will be managed in accordance with the District's administrative policy for use of District Environmental Mitigation Property.

4.3.4 Project Impact Analysis

4.3.4.1 Methodology

A search of CDFW's CNDDDB, CNPS database, and USFWS IPAC was conducted on March 30, 2017, to determine the potential for sensitive plant and wildlife species to occur within the vicinity of each planning district. The search was conducted using a 9-quad species search centered on the USGS National City, California 7.5 quadrangle map (CDFW 2017) and the USGS Point Loma, California 7.5 quadrangle map, and a polygon encompassing each planning district was created using the

USFWS IPAC web application tool (USFWS). A total of 44 sensitive plant species and 31 sensitive wildlife species were reviewed for their potential to occur within the proposed PMPU area.

On April 19, 2017, ICF biologists performed a terrestrial reconnaissance level survey of each planning district. The reconnaissance survey was conducted by driving and walking throughout the planning districts, noting existing habitat conditions to identify suitable habitat for sensitive terrestrial plants and wildlife and the potential for such species to occur within each planning district. Survey efforts were more focused in specific areas within planning districts where habitat was suitable and species observations have been documented.

The desktop analysis for sensitive marine species included review of sources documenting marine mammals in Southern California. The two primary sources used to determine marine mammal species present and their likelihood to occur in nearshore coastal waters or within San Diego Bay include Jefferson et al. (2014) and NAVFACSW (2016). The occurrence of marine bird species was evaluated through review of baywide avian surveys (TDI 2009, 2011). Bay habitat data and eelgrass occurrence was determined through review of the INRMP (U.S. Navy and Port 2013), the 2017 baywide eelgrass inventory (NAVFACSW and Port 2017), and the 2020 baywide eelgrass inventory (NAVFACSW 2021).

4.3.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining the significance of biological resources impacts resulting from the proposed PMPU. The determination of whether a biological resources impact would be significant is based on the thresholds described below and the professional judgment of the District as Lead Agency supported by the recommendations of qualified personnel at ICF and MTS, all of which is based on the evidence in the administrative record.

Impacts are considered significant if the proposed PMPU would result in any of the following.

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW, NMFS, or USFWS.
3. Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Result in substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites.
5. Conflict with any applicable local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or with the provisions of an applicable adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

4.3.4.3 Polices that May Avoid or Reduce Impacts

The following proposed PMPU policies are intended to reduce or avoid impacts on biological resources and are considered in the impact analysis that follows.

WLU Policy 5.1.2 Intertidal and Conservation Open Space use designations shall be enhanced, restored, and protected as further described in ECO Goal 1 (Chapter 3.3, Ecology Element).

ECO Policy 1.1.2 The District shall prioritize and pursue opportunities for the protection, conservation, creation, restoration, and enhancement of sensitive habitats and State or federally listed coastal species.

ECO Policy 1.1.3 Future development adjacent to conservation areas and other sensitive habitats shall:

- a. Be coordinated, sited, and designed to avoid impacts where feasible or where legally required; if avoiding impacts is not feasible, or avoidance is not legally required, mitigate impacts in the following order of preference:
 1. On-site;
 2. In a mitigation bank;
 3. In the same ecoregion with the Bay;
 4. Elsewhere in the Bay; or
 5. In the same watershed of the Coastal Zone;
- b. Require biological monitoring as determined by the District and/or the wildlife agencies; and
- c. When affecting disturbed sensitive habitat areas, restoration or enhancement must occur to the greatest extent feasible.

ECO Policy 1.1.5 Landside development shall establish and maintain ecological buffers of 100 feet between the landside development and a saltmarsh wetland to preserve and protect the wetland habitat for the anticipated life of the development. The precise width of the buffer is to be based on the location, type of habitat, and quality of habitat. Exceptions to the width of ecological buffers are as follows:

- a. A reduced buffer to a minimum of 50 feet may be allowed pursuant to a site-specific analysis in coordination with the wildlife agencies. The site-specific analysis may include evaluation of current habitat that is degraded, nonfunctioning, of poor quality; located immediately adjacent to existing development; or
- b. An ecological buffer shall not be required for wetland areas in an urbanized area if such buffer would cause displacement or removal of existing development.

ECO Policy 1.1.8 Development shall integrate drought-tolerant species native to the San Diego County coastal zone as a part of landscaped areas.

ECO Policy 1.1.9 Planting of invasive plant species shall be prohibited in landscaped areas. Development that contains landscaped areas with existing invasive species shall not continue to maintain these invasive species.

ECO Policy 1.1.10 Development above the water or adjacent to sensitive habitat areas should use ecologically sensitive lighting that is shielded and directed away from the water or sensitive habitat areas, sensor activated, and of the lowest possible color temperature that also meets public safety requirements.

ECO Policy 1.1.11 The District shall encourage the use of biologically engineered stormwater solutions to prevent degradation of coastal wetlands and marine ecosystems, and to reduce stormwater pollution to the Bay.

ECO Policy 1.1.12 Science-based management practices shall be used on Tidelands to guide water, sediment, and natural resource decisions.

ECO Policy 1.1.13 The District shall identify locations throughout the Bay that could support habitat enhancement, restoration, creation, and protection to benefit sensitive habitats and State and federally listed species. After specific locations are identified, the District shall:

- a. Explore opportunities for specific restoration, creation, enhancement, and mitigation banking projects in these areas; and
- b. Coordinate with resource agencies and regulatory agencies to permit projects that provide multiple benefits to Tideland areas.

ECO Policy 1.1.14 Strive to achieve a net increase of wetland habitat acreage from baseline conditions throughout the Bay.

ECO Policy 1.1.15 The District shall identify various ecological opportunity areas within water use designations that have shallow subtidal or intertidal habitat that may benefit from additional restoration or enhancement, or additional nature-based shoreline stabilization. (refer to *Figure 3.3.2 Ecological Opportunity Areas* for an identification of approximate locations for initial ecological opportunity areas).

ECO Policy 1.1.16 The District shall provide information to the public about the water quality risks associated with invasive species and about measures to avoid and reduce the spread of invasive species.

ECO Policy 1.1.17 The District shall prioritize the use of nature-based solutions composed of natural or sustainable materials that increase shoreline biodiversity and coastal resiliency, including but not limited to living shorelines and wetland and coastal habitat restoration, where feasible and applicable.

ECO Policy 1.1.18 Adaptation strategies or other natural resource management practices shall be implemented to protect coastal habitats and ecosystem function under a range of future sea level rise and climate change scenarios.

ECO Policy 1.1.19 Support creative and innovative solutions to improve the resiliency of the Bay's marine ecosystems and the biodiversity within Tidelands.

ECO Policy 1.1.21 The District shall maximize habitat connectivity and continuity for intertidal and subtidal habitats within the Bay particularly for those areas that provide habitat and nursery areas for estuarine and marine species.

ECO Policy 1.1.22 The District shall strive to conserve and enhance intertidal and subtidal habitat in an effort to reduce fragmentation, improve habitat functionality and create a connected network of intertidal and subtidal habitat throughout Tidelands.

ECO Policy 1.1.23 The District shall pursue opportunities to create, preserve, enhance or restore intertidal and subtidal habitats in areas that have historically been impacted by development.

ECO Policy 1.2.1. In cooperation with regional, State, and federal resource agencies, the District shall develop a mitigation credit program, subject to agency approval, to improve habitat quality and compensate for unavoidable wetland losses through the protection, restoration, creation, and enhancement of wetland habitats as follows:

- a. The mitigation credit program may consist of the creation of, or use of mitigation banks, in-lieu fee programs, eelgrass mitigation areas or other mitigation offset measures on Tidelands. With respect to future and existing mitigation credits, use of credits shall be given priority in the order listed below for the following types of development:
 1. District led and initiated development on Tidelands;
 2. Coastal-dependent development on Tidelands by a third-party applicant;
 3. Coastal development on Tidelands that provides a public benefit; or
 4. Other development.

Credits derived from restoring or enhancing tidally influenced habitat shall first be used to mitigate impacts on tidally influenced waters or wetlands, whenever feasible.

- b. As part of the application process to use such credits, third-party applicants must demonstrate that they have used good-faith efforts to minimize development impacts, and, to the extent feasible, mitigate within the same development site. After demonstration of a mitigation need, applicants shall pay a fee for use of credits as established by the District. District approval is required for the right to use any of the credits.

ECO Policy 2.1.5 The District shall continue to conduct, or require permittees to conduct, the long-term monitoring of water, sediment, eelgrass, birds, and marine life in the Bay.

ECO Policy 4.1.1 The District shall continue partnerships and collaboration with key agencies and stakeholders, including the U.S. Navy and U.S. Fish and Wildlife Service refuges, to enhance conservation, protection, and restoration of natural resources in and around the Bay and Tidelands. These partnerships may include combining resources and identifying complementary programming and policies to be implemented to improve the ecology of the Bay.

ECO Policy 4.1.2 The District shall coordinate watershed planning, pollution prevention, and stormwater program implementation with other partner agencies and jurisdictions.

ECO Policy 4.1.3 The District shall pursue partnerships with regulatory agencies, research institutions, private parties, and nongovernmental organizations (NGOs) to improve water quality in the Bay and promote public awareness and understanding of water quality issues.

ECO Policy 4.1.4 The District shall engage with regulatory agencies on coastal resiliency measures to address potential future environmental stressors, such as seawater intrusion, habitat conversion, and ocean acidification.

ECO Policy 4.2.1 The District shall continue environmental education programs to increase public understanding and appreciation of Tidelands' and the Bay's natural resources and how to protect them.

4.3.4.4 Project Impacts and Mitigation Measures

Threshold 1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS?

Impact Analysis

Impacts of Water and Land Uses

As described under Section 4.3.3, *Laws, Regulations, Plans, and Policies*, there are numerous Federal, State, and local laws, regulations, plans, and policies that help reduce impacts on candidate, sensitive, or special-status species from development projects. These would apply to any future site-specific projects proposed consistent with the PMPU. Such laws, regulations, policies, and plans include the following.

- **The Federal Endangered Species Act** forbids any person to “take” an endangered or threatened species. Take is defined in Section 3 of the act as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The U.S. Supreme Court ruled in 1995 that the term “harm” includes destruction or modification of habitat.
- **The Migratory Bird Treaty Act** prohibits the killing or transport of native migratory birds, or any part, nest, or egg of any such bird.
- **The Federal Water Pollution Control Act Amendments of 1972**, commonly known as the CWA (33 USC 1251–1376), as amended by the Water Quality Act of 1987, is the major Federal legislation governing water quality. The purpose of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Diminished water quality can impact some species identified as a candidate, sensitive, or special-status species.
- **The Marine Mammal Protection Act (MMPA)** of 1972 with amendments in 1994 prohibits and establishes definitions relative to harassment of marine mammals.
- **The California Endangered Species Act (CESA)** establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitat. CESA mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy.

- **The Porter-Cologne Water Quality Control Act** provides for statewide coordination of water quality regulations through the establishment of the State Water Resources Control Board (SWRCB) and nine separate RWQCBs that oversee water quality on a day-to-day basis at the regional/local level.
- **The California Fish and Game Code** regulates the take of fish and game. The California Department of Fish and Wildlife also designates some species as protected regardless of State or Federal endangered species listing status.

Construction

Approval of the plan would not directly result in any specific construction project, including the construction of any buildings or infrastructure. Future development included within the planned improvements and planning districts' Visions, as well as future development that is consistent with the goals, objectives, and policies of the proposed PMPU, including the applicable water and land uses of the proposed PMPU, will occur over the 2050 planning horizon. As an example, buildout of the proposed PMPU may include the construction of new hotels and lower cost accommodations; restaurants and entertainment venues; park space and promenades; retail, convention, and meeting space; office space; and other uses that either are water dependent or help to enhance the waterfront experience. In-water uses could include aquaculture, marine technology, additional vessel activity associated with more slips, and docks with waterside uses that include anchorage, commercial fishing berthing, industrial and deep-water berthing, marine services berthing, navigation corridors, recreational berthing, sportfishing berthing facilities, and mitigation banks. Although implementation of the proposed PMPU would increase the construction activity in the proposed PMPU area, the buildout of the proposed PMPU would take place over a 30-year timeframe, and construction activities would occur periodically throughout that period.

Marine Resources

In general, construction activities from implementation of the proposed PMPU would potentially cause construction-induced noise, increases in turbidity, and release of particulates and chemicals of concern into U.S. or State waters. A discussion of each of these potential construction-related impacts is provided below.

Construction-Induced Noise Impacts on Marine Resources

The demolition and construction necessary for future development projects could result in construction-induced noise impacts that could alter the behavior of protected species. These impacts could occur from overwater construction activities such as hammering, drilling, operation of heavy construction equipment, or unloading building materials. Construction-induced noise impacts from in-water construction activities such as pile driving could disrupt the foraging behavior of the California least tern if construction occurs during the California least tern nesting season. Other sensitive fish-foraging avian species such as brown pelican can similarly be impacted. Therefore, impacts are considered significant (**Impact-BIO-1**). Construction noise can also impact species protected under the MBTA and California Fish and Game Code. For instance, marine-dependent avian species such as the black-crowned night heron nest in trees near shore where their nesting activities could be disturbed by both landside and overwater construction noise. Disturbance can cause nesting birds to abandon nest sites or alter nesting behavior in ways that lower nesting success. Therefore, construction-induced noise impacts on protected marine-dependent species are considered significant (**Impact-BIO-2**).

Furthermore, in-water construction activities associated with future site-specific projects could generate enough underwater noise to physically injure marine mammals, sea turtles, and fishes during construction, by the use of an impact hammer or vibratory pile driving. Any noise-related impacts would be dependent on the type of activity being performed and the biology of the considered species. In-water impact hammering or vibratory pile driving activity by comparison could potentially generate enough underwater noise to injure (Level A Harassment) or alter behavior (Level B Harassment) for marine mammals, green sea turtles, and fishes. Impacts are therefore considered significant (**Impact-BIO-3**).

Construction Noise Mitigation Measures for Marine Resources

Mitigation measures for reducing noise-related impacts on foraging California least tern and other sensitive fish feeding avian predators during the nesting season (**Impact-BIO-1**) include construction monitoring during the nesting season from April 1 to September 15 by a qualified biological monitor, and evaluation of construction noise and location relative to sensitive avian species by a qualified biologist (**MM-BIO-1**). Based on the evaluation of the disturbance(s), the monitor will have the ability to reduce or temporarily stop noise-producing activities if those activities are assessed to impact, or otherwise alter, the foraging behavior of sensitive avian species, during the nesting season. Implementation of **MM-BIO-1** would reduce impacts on foraging California least terns and other sensitive fish feeding avian predators during the nesting season to less than significant. Mitigation measure **MM-BIO-1** achieves this by minimizing the effects of noise-producing activities that could alter foraging behavior.

Disturbance of sensitive nesting marine-dependent avian species (**Impact-BIO-2**) can be minimized by ensuring that nesting bird behavior is not modified during construction activities that generate loud noises or vibrations. The District would require future project proponents to retain a qualified biologist who would perform a nesting bird survey within 500 feet of the noise-generating activity, 1 week prior to the start of construction that utilizes heavy equipment. If nests are found, the project proponent would delineate an exclusion zone around the nest, and perform a survey once per week during construction until use of heavy equipment ceases (**MM-BIO-2**). If noise levels are determined to be 10 A-weighted decibels (dBA) or greater above ambient background noise levels within the vicinity of an active nest by a qualified biologist, sound barriers with a minimum sound transmission class (STC) rating of 28 would be placed between the noise-generating activity and the nest to reduce noise levels. Distance from the nest would be determined by the qualified biologist based on the species nesting and the noise acceptability exhibited by the birds. If noise effects cannot be minimized, construction would be altered to the extent necessary to ensure that impacts on the nesting species are negligible in a manner determined by the District and based on the opinion of the qualified biologist and/or guidelines and standards established by a District-approved project-specific nesting bird plan. Implementation of **MM-BIO-2** would reduce impacts on nesting avian species to less than significant by implementing the aforementioned measures to minimize noise impacts on active nests.

Potential impacts on marine mammals, fishes, and green sea turtles (**Impact-BIO-3**) can be minimized by implementing the various measures required under **MM-BIO-3**. This mitigation measure requires monitoring of hauled out marine mammals whenever noise-generating activities are in excess of 90 decibels (dB) root mean square (RMS) for harbor seals and 100 dB RMS for non-harbor seals (sea lions) at the haul out locations or if the haul out is within 500 feet of the noise source. These criteria are established by NOAA NMFS as noise levels for Level B harassment (behavior alteration) of marine mammals when those mammals are hauled out. Protecting marine

mammals against Level B harassment when hauled-out also ensures protection against Level A harassment (injury). If marine mammals are hauled out within the zone where sound thresholds are exceeded, then the biological monitor will notify the contractor to halt or alter the noise-generating activity such that construction noise is at or below 90dB RMS or 100 dB RMS for harbor seals and non-harbor seals, respectively.

For future site-specific development projects that generate in-water noise such as pile driving, the biological monitor will monitor for marine mammals within isopleth distances calculated to be within the range of sound thresholds established by NOAA NMFS for Level A and Level B harassment of marine mammals (NMFS 2018). Like monitoring for hauled-out animals, the biological monitor will have the authority to halt or modify work based on animal observations relative to monitored isopleths. Green sea turtles will be monitored using the maximum calculated isopleth for Level B harassment of marine mammals, typically 500 feet; there is no specific guidance for sea turtles, but they are often monitored alongside marine mammals to ensure their protection.

In addition, future site-specific development projects where impact and/or vibratory pile driving occur would utilize a soft start for pile driving. This generally means performing three pile strikes at reduced (approximately 50%) force, then waiting 30 seconds. This is repeated three times before starting pile driving at full force. This measure provides time for marine mammals, green sea turtles, and fishes to disperse from the sound source area in the event the sound is a source of stress for the animal. Therefore, implementation of **MM-BIO-3** would reduce impacts to less than significant.

Construction Water Quality Impacts on Marine Resources

Construction activities associated with future projects consistent with the proposed PMPU could increase levels of turbidity in waters within the Bay in the absence of regulations. Increases in turbidity as the result of landside construction and demolition activities could be generated by exposed soils entering WoUS during rainfall events. In general, increased turbidity could limit the ability of California least terns and other sensitive fish-foraging avian species to locate prey. Additionally, construction activities for future development projects would also potentially result in impacts on protected species by the inadvertent introduction of pollutants such as fuel, oil, and/or other industrial and mechanical fluids into WoUS, either from construction equipment, landside construction vehicles, or construction vessels, and from partially completed overwater structures.

The above potential construction-related stormwater impacts would be less than significant given compliance with regulations that require and manage the implementation of best management practices (BMPs) during construction. The District's Jurisdictional Runoff Management Program outlines the required minimum BMPs for all construction projects within the District's jurisdiction. Construction activities proposed consistent with the proposed PMPU that would disturb more than 1 acre of land would be required to comply with the Construction General Permit, which would require development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) by a Qualified SWPPP Developer. The SWPPP would identify what construction BMPs would be implemented in order to protect stormwater runoff and include a monitoring plan for measuring BMP effectiveness. BMPs are required to be inspected regularly by a Qualified SWPPP Practitioner to ensure BMPs are performing as anticipated. For projects that are not subject to the Construction General Permit (i.e., under 1 acre of land disturbance), PMPU construction activities would still need to comply with the District's Jurisdictional Runoff Management Program (JRMP), which requires preparation of a Construction BMP Plan. Under either the SWPPP or Construction BMP Plan,

a variety of construction BMPs would be required to be implemented throughout the various construction phases to protect water quality.

At a minimum, BMPs would include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The construction SWPPP or Construction BMP Plan would specify properly designed, centralized storage areas that keep these materials away from rain and associated runoff. When grading is conducted during the rainy season, the primary BMPs selected would focus on erosion control (i.e., keeping sediment in place) and then on sediment control (i.e., keeping sediment on site). Measures would include a range of stormwater control BMPs: for example, installing erosion control such as silt fences, staked fiber rolls, and geofabric to prevent silt runoff to storm drains or waterways. Topsoil and backfill would be stockpiled, protected, and replaced at the conclusion of construction activities. Disturbed soil would be revegetated as soon as possible with the appropriate selection and schedule for turf, plants, and other landscaping vegetation. Compliance with these regulatory requirements would ensure that this potential impact would be less than significant. Please see Section 4.8, *Hydrology and Water Quality*, for more details.

Temporary increases in turbidity could also result from waterside construction activities that involve bottom sediment disturbance. This could occur during activities such as pile driving, incidentally during vessel contact with bottom substrate, and by propeller wash in shallow water (see **Impact-WQ-1** in Section 4.8, for a discussion of water quality impacts from turbidity). In general, increased turbidity could limit the ability of California least terns and other sensitive fish-foraging avian species to locate prey. Additionally, disruption to eelgrass can occur due to increased turbidity. Prolonged increases in turbidity can reduce primary productivity associated with eelgrass because the turbid water prevents sunlight from reaching this primary producer and sensitive species. These impacts are considered significant (**Impact-BIO-4**).

Landside Construction Water Quality Mitigation Measures for Marine Resources

Construction water quality mitigation measures provide means to limit turbidity, nutrient, and pollution impacts during project construction events. Mechanisms generally include being responsive to spill events, maintaining barriers to prevent the spread of spills, and implementing mechanisms to control the flow of contaminated runoff into the Bay.

Impacts associated with turbidity increases in the Bay from landside runoff (**Impact-BIO-4**) can be reduced by controlling water contact with exposed soils and maintaining clean worksites (**MM-BIO-4**). Stockpiles of soils to be removed or stored for use on a given jobsite would be covered with impermeable barriers and held down with gravel bags to prevent rainwater from washing exposed soils into the Bay. Exposed landscape soils would utilize straw wattles as necessary to prevent erosion and transport of soils into the Bay. Finally, jobsites would be swept daily to remove soil and particulates from impermeable surfaces so that those materials do not enter the storm drain system. Implementation of **MM-BIO-4** would reduce impacts to less than significant.

Turbidity generated by in-water construction activities (**Impact-BIO-4**) can be reduced by implementing various measures required under **MM-BIO-4**. These include contractor education and implementation of BMPs during in-water construction. Vessel operators would be instructed regarding the impacts of propeller wash with regards to erosion of sediment and suspension of fine particulates; this will allow vessel operators to adjust operations when possible in ways that lessen impact. All vessels would be required to use depth sounders that are routinely checked to ensure

vessels are positioned to avoid shallow water areas. Finally, when construction involves necessary bottom disturbance such as dredging or pile driving, silt curtains would be in place around the activity to limit the spread of any turbidity generated during the bottom-disturbing activity. In addition to **MM-BIO-4**, implementation of **MM-WQ-1** through **MM-WQ-3**, as described in Section 4.8, would also address potential water quality impacts on marine resources by requiring monitoring of turbidity, implementation of BMPs, and application of silt curtains during construction-related sediment disturbance. As such, implementation of **MM-BIO-4** and **MM-WQ-1** through **MM-WQ-3** would reduce impacts to less than significant. Potential impacts associated with turbidity and bottom disturbance that might reduce the extent of eelgrass habitat are identified under Threshold 2 (refer to **Impact-BIO-10**) and the associated mitigation measures are provided as **MM-BIO-10**.

Construction Overwater Cover Impacts on Marine Resources

In-water construction activities associated with the installation of new, overwater berthing structures (i.e., vessel slips) for recreational and commercial vessels, along with the potential construction of Marine Technology, would result in temporary overwater coverage. Temporary overwater cover from barges and other construction vessels during waterside construction of future projects could temporarily impact California least tern and other fish-foraging species by limiting available open water area for foraging. While temporary, this impact would be significant in cases where vessels cover productive nearshore waters for extended periods of time (i.e., greater than 30 days) (see **Impact-BIO-7** as discussed under *Operation* below).

Construction Overwater Cover Mitigation Measures for Marine Resources

Construction-related overwater cover impacts can be reduced if vessels, equipment, and structures are not left staged for prolonged periods of time (**MM-BIO-7**). Any barges with equipment or supplies would not be left anchored at a jobsite for more than 30 days, unless they are actively engaged in construction and required to maintain a specific position during that construction. In cases where floating structures such as docks are to be installed, the new dock structures would only be delivered to the construction site once the old docks have been removed and the piles are installed. Dock structures would not be staged and maintained overwater while waiting to be installed. Similarly, removed dock structures would be taken away from the project site for disposal within 1 week of removal. Implementation of **MM-BIO-7** would reduce impacts to less than significant.

Terrestrial Resources

As discussed in Section 4.3.2.6, *Special-Status Species*, and shown in Table 4.3-3, several sensitive terrestrial plant and wildlife species have the potential to occur within the proposed PMPU area based on habitat and potential foraging opportunities. Several sensitive plant species were identified as either occurring or having potential to occur within the dune habitat in PD9. However, no landside development under the proposed PMPU would occur within PD9 that could impact the planning district's dune habitat. Therefore, potential impacts on sensitive plants from future PMPU-related construction activities would be less than significant.

The California least tern is both a Federally and State-listed as endangered species under the ESA and CESA, respectively. Western snowy plover, Ridgway's rail, gull-billed tern, black skimmer, and Belding's savanna sparrow are protected under the MBTA, the ESA, and/or CESA. Future construction projects have the potential to impact nesting behavior of these species during the

nesting season from the generation of noise, dust, or nighttime lighting from construction activity, which could impede the use of breeding sites during the general avian nesting season (February 15 through August 31). Therefore, potential impacts on nesting opportunities for these species from future PMPU-related construction activities would be significant (**Impact-BIO-5**).

Additionally, a number of common avian species that are protected under the MBTA and California Fish and Game Code, have the potential to nest in existing trees and shrubs or on existing human-made structures (e.g., roofs, rafters) throughout the proposed PMPU area. The MBTA prohibits the take of nearly all native bird nests. Under the MBTA, “take” means to kill, destroy, or directly harm individuals, eggs, or nests. Similar provisions within the California Fish and Game Code (Sections 3503 and 3503.5) protect all nesting native birds and all non-game birds that occur naturally in the state (Section 3800). Removal of existing trees, demolition of existing structures, and construction activities in all planning districts in the proposed PMPU area could result in significant direct impacts on active nests or indirect impacts through construction noise, dust, or nighttime lighting (**Impact-BIO-5**). Mitigation measure **MM-BIO-5** requires implementation of measures such as BMPs, preconstruction nesting bird surveys, and the establishment of no-disturbance buffers should active nests be detected. Implementation of **MM-BIO-5** would reduce potential impacts on nesting birds (**Impact-BIO-5**) to less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, *Project Description*, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on sensitive marine and terrestrial species (**Impact-BIO-1** through **Impact-BIO-5**). These significant impacts would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Because Option 1 would involve landside construction activities involving hammering, drilling, operation of heavy construction equipment, or unloading building materials, construction-induced noise impacts from landside construction activity could impact species protected under the MBTA and California Fish and Game Code. For instance, avian species such as the black-crowned night heron nest in trees near shore, and a number of common avian species protected under the MBTA and California Fish and Game Code nest in existing trees and shrubs or on existing human-made structures (e.g., roofs, rafters), where their nesting activities could be disturbed by construction noise. Disturbance can cause nesting birds to abandon nest sites or alter nesting behavior in ways that lower nesting success. Therefore, impacts are considered significant (**Impact-BIO-2**). In addition, species that are protected under the MBTA and California Fish and Game Code have the potential to be impacted by the removal of existing trees, demolition of existing structures, and construction activities under Option 1, and these construction activities could be considered significant direct impacts on active nests or indirect

impacts through construction noise, dust, or nighttime lighting (**Impact-BIO-5**). However, these would not be additional or more severe impacts than buildout of the proposed PMPU without Options 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on sensitive marine and terrestrial species (**Impact-BIO-1** through **Impact-BIO-5**). These significant impacts would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would involve landside construction activities involving hammering, drilling, operation of heavy construction equipment, or unloading building materials; and construction-induced noise impacts from landside construction activity. Construction noise can impact species protected under the MBTA and California Fish and Game Code. For instance, marine dependent avian species such as the black-crowned night heron nest in trees near shore where their nesting activities could be disturbed by construction noise. Disturbance can cause nesting birds to abandon nest sites or alter nesting behavior in ways that lower nesting success. Therefore, impacts are considered significant (**Impact-BIO-2**). In addition, a number of common avian species that are protected under MBTA and California Fish and Game Code have the potential to nest in existing trees and shrubs or on existing human-made structures (e.g., roofs, rafters) throughout the proposed PMPU area, including PD3. Similar provisions within the California Fish and Game Code (Sections 3503 and 3503.5) protect all nesting native birds and all non-game birds that occur naturally in the state (Section 3800). Removal of existing trees, demolition of existing structures, and construction activities under Option 2 could result in significant direct impacts on active nests or indirect impacts through construction noise, dust, or nighttime lighting, and are considered a significant impact (**Impact-BIO-5**). However, these would not be additional or more severe impacts than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on sensitive marine and terrestrial species (**Impact-BIO-1** through **Impact-BIO-5**). These significant impacts would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would involve landside construction activities involving hammering, drilling, operation of heavy construction equipment, or unloading building materials; and construction-induced noise impacts from landside construction activity could impact species protected under the MBTA and California Fish and Game Code. For instance, marine dependent avian species, such as the black-crowned night heron, nest in trees near shore where their nesting activities could be disturbed by construction noise. Disturbance can cause nesting birds to abandon nest sites or alter nesting behavior in ways that lower nesting success. Therefore, impacts are considered significant (**Impact-BIO-2**). In addition, a number of common avian species such as mourning dove, house finch, and black phoebe, which are protected under MBTA and California Fish and Game Code, have the potential to nest in existing trees and shrubs or on existing human-made structures (e.g., roofs, rafters) throughout the proposed PMPU area, including PD3. Similar

provisions within the California Fish and Game Code (Sections 3503 and 3503.5) protect all nesting native birds and all non-game birds that occur naturally in the state (Section 3800). Removal of existing trees, demolition of existing structures, and construction activities under Option 3 are considered significant direct impacts on active nests or indirect impacts through construction noise, dust, or nighttime lighting (**Impact-BIO-5**). However, these would not be additional or more severe impacts than buildout of the proposed PMPU without Option 3.

Operation

Buildout of the proposed PMPU would result in the future development of visitor-serving uses such as hotels, restaurants, and retail, in addition to marine technology. While several planning districts would experience little to no growth or new development, PD2 and PD3 are proposed to allow substantial development, and thus would have the potential to result in impacts on terrestrial and marine biological resources. In-water activity would increase as a result of additional recreational slips in PD2, PD3, PD9, and PD10, and commercial slips would increase in PD3. The proposed PMPU could lead to future development that would result in operational activities both on land and in the water. These operational impacts are described below.

Marine Resources

Operational impacts on marine resources could include the entry of harmful chemicals into WoUS, increases in turbidity from runoff, nutrient loading of marine waters from fertilizers used to maintain landscape vegetation, overwater cover impacts from permanent overwater structures, and increased susceptibility of protected avian species to predation from raptors and other large predatory birds. A discussion of each of these potential operation-related impacts is provided below.

Operational Water Quality Impacts on Marine Resources

Operation of future development could result in the introduction of pollutants such as fuel and oil from vessels and vehicles, and/or other industrial and mechanical fluids, as well as fertilizers used for landscaping. These pollutants could enter WoUS directly or indirectly through subsequent rainfall events. Once introduced to the Bay they could then enter the food chain and ultimately be ingested by fish and invertebrates preyed upon by protected species. Fertilizers can cause plankton blooms and increase the risk for both toxic algal blooms and eutrophic conditions that could suffocate marine fish and invertebrates.

The implementation of permanent BMPs would reduce water quality impacts associated with operation of landside and marina development to less than significant. Future development allowed under the proposed PMPU would be required to comply with the District's Stormwater Management and Discharge Control Ordinance (i.e., Article 10) and the JRMP, which include specific requirements for all development and redevelopment activities. Minimum BMPs consistent with the District *BMP Design Manual* require the use of site design BMPs and source control BMPs for all projects. The District's Article 10 also specifically requires pollutant control BMPs for all Priority Development Projects (PDPs), which includes projects falling under the proposed PMPU. Any project considered a PDP would be required to implement pollutant control BMPs, following the hierarchy described in the District's *BMP Design Manual* (retention, partial retention with biofiltration, biofiltration, or flow-through with participation in an Alternative Compliance Program). Stormwater pollutant control BMPs are engineered facilities that are designed to retain (i.e., intercept, store, infiltrate, evaporate, and evapotranspire), biofilter, and/or provide flow-through treatment of stormwater runoff generated on the project site. Additionally, a post-construction Stormwater Quality

Management Plan (SWQMP) must be prepared for all projects to identify the project-specific site design and source control BMPs (all projects) and pollutant control BMPs (for PDPs). All future proposed new marina development projects are required to have vessel pump out facilities to protect water quality. Compliance with these regulatory requirements would ensure that this potential impact would be less than significant. Please see Section 4.8 for more details.

Aquaculture within the proposed PMPU area allows for the cultivation of shellfish and seaweed. Aquaculture, particularly shellfish and seaweed aquaculture, offer multiple co-benefits, such as fisheries enhancement, ecosystem restoration, bioremediation, carbon sequestration, mitigation banking, and habitat enhancement and otherwise improving water quality by removing particulates and ecosystem productivity. Notably, shellfish aquaculture has been shown to perform a similar ecological function as other structured habitats such as eelgrass, generating increased benthic and epibenthic invertebrate abundance (Hosack et al. 2006), an ecological benefit that is also recognized by the NMFS (2016).

However, if viewed in the context of available fish habitat and forage, shellfish operations compete with natural populations of fish and invertebrates that consume plankton and organic particles and limit foraging opportunities for coastal pelagic fish species. For example, Pacific sardine and northern anchovy feed on the same small planktonic organisms that shellfish would feed on. Therefore, the introduction of shellfish for the purpose of aquaculture could impact essential fish habitat and associated managed species through the potential reduction of foraging opportunities. Additionally, benthic impacts of shellfish aquaculture can result from the presence of gear and equipment, shell debris, and the accumulation of pseudofeces or fouling organisms due to natural processes and dependent upon culture methods. Collectively, these impacts are considered significant (**Impact-BIO-6**). To mitigate this potential impact, **MM-BIO-6** requires future project proponents to develop and implement a Shellfish Aquaculture Mitigation Program that includes specific requirements for addressing potential impacts on essential fish habitat and benthic communities from shellfish aquaculture operations. Implementation of **MM-BIO-6** would reduce **Impact-BIO-6** to less than significant.

Operational Overwater Cover and Shading Impacts on Marine Resources

The operational impacts associated with overwater cover could be introduced by future site-specific projects consistent with the proposed PMPU. Shading of water area can be introduced by structures on-shore, dependent upon proximity, size, and solar aspect. The installation and use of overwater structures would result in a permanent reduction of potential open water foraging habitat for California least tern and other sensitive fish-foraging species. The overwater coverage also leads to lower eelgrass productivity due to shading if the overwater coverage is above eelgrass. Similarly, structures on shore that increase shading of water area could lower eelgrass productivity where eelgrass is shaded. The effect would increase as the structure gets closer to the water and as the height of the structure increases. Additionally, solar aspect would influence the level of impact. Structures that face the sun to the south with water to the north would result in a greater temporal impact from shading. The lost eelgrass productivity affects all higher trophic levels due to the lost production of organic carbon. These impacts are considered significant (**Impact-BIO-7**). Shading impacts on marine habitats that include eelgrass are discussed under Threshold 2 (**Impact-BIO-11**) and mitigation measures for eelgrass habitat impacts are also provided under Threshold 2 in **MM-BIO-10**.

Operational Overwater Cover Mitigation Measures for Marine Resources

Overwater cover from permanent structures can be mitigated in-kind if feasible, or out-of-kind if in-kind options are not available. Mitigation measure **MM-BIO-7** includes a variety of suitable options for mitigating impacts associated with **Impact-BIO-7**. These options can be implemented either individually or in combination, as may be required through consultation with applicable resource agencies during permitting processes, including but not limited to, NMFS, CDFW, USFWS, RWQCB, and/or USACE, to offset impacts from permanent overwater coverage. In-kind options include removal of existing overwater coverage at a 1:1 mitigation ratio at other locations in San Diego Bay to offset overwater coverage for any future project consistent with the proposed PMPU, and/or withdrawal of credits from the District's shading credit program in accordance with BPC Policy 735, if approved by the District and resource agencies. Out-of-kind mitigation measures include creation or restoration of wetlands or eelgrass habitat at a 1.2:1 mitigation ratio to improve fisheries and associated wildlife beneficial uses in consultation with regulatory agencies identified above, and/or contribution to a suitable in-lieu fee program, or an approved mitigation bank. Implementation of **MM-BIO-7** would reduce potential permanent overwater coverage impacts (**Impact-BIO-7**) to less than significant. Mitigation measures for overwater coverage and shading impacts on eelgrass and other marine habitats are addressed under Threshold 2.

Operational Structural Impacts on Marine Resources

Future development projects under the proposed PMPU that would lead to increasing the susceptibility of protected avian species to predation from raptors and other large predatory birds include the addition of landside structures such as hotels, restaurants, and retail, or the addition of nearshore berthing structures. The addition of these structures could inadvertently create permanent additional perches for raptors and other large predatory birds that prey on other marine-based protected species. The San Diego International Airport, which is adjacent to PD2, supports an annual breeding colony of California least tern. Peregrine falcons and other raptor species have been observed preying on California least terns at the airport (Patton 2015). Furthermore, the coastal dune and saltmarsh habitats characteristic of PD9 and PD7, respectively, are habitat types known to be used by Ridgeway's rail, western snowy plover, and Belding's savannah sparrow. Therefore, any future development proposed within 100 feet of these areas, whether occurring on land or over the water, could indirectly impact protected avian species, which is considered a significant impact (**Impact-BIO-8**).

Operational Structural Mitigation Measures for Marine Resources

Impacts associated with addition of new permanent perches that could be used by raptors or other large predatory birds (**Impact-BIO-8**) can be mitigated by installing features to minimize the use of new structures such as buildings, light poles, fences, and pilings by avian predators of sensitive species. For structures built close to the habitat of sensitive species, perch deterrents would be installed to prevent raptors and other predatory birds from perching, thereby reducing predatory pressure on sensitive species (**MM-BIO-8**). Implementation of **MM-BIO-8** would reduce **Impact-BIO-8** to less than significant.

Terrestrial Resources

Bird strikes to windows of buildings have been documented as major sources of avian fatalities (Klem et al. 2009). Collisions with glass windows claim the lives of hundreds of millions of birds each year in the United States (Sheppard and Phillips 2015). In particular, highly reflective windows

that are opposite vegetation appear to confuse avian species and prevent adequate avoidance behavior to limit fatalities (Klem et al. 2009). The best predictor of strike rates is the density of birds in the vicinity of the glass, which in turn is likely a factor influenced by the presence or availability of water, vegetation, and/or bird feeders (Klem 2008). In general, many studies have concluded that the majority of bird strikes on buildings occur during the day and involve both migrant and resident avian species hitting reflective plate glass windows.

Future activities under the proposed PMPU that could result in increased bird strike potential include construction of new hotels and meeting space, restaurants, and retail in PD2 and PD3. The use of reflective building and glass finishes may confuse birds in flight, leading to an increase in strikes, which is considered a significant impact on avian species protected under the MBTA and sensitive and listed species protected under ESA and CESA (**Impact-BIO-9**). Implementation of **MM-BIO-9** would reduce this impact to less than significant by requiring that final building design incorporate design strategies recommended by the *Bird-Friendly Building Design* and approved by the District.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant operation-related impacts on sensitive marine and terrestrial species (**Impact-BIO-6** through **Impact-BIO-9**). These significant impacts would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities under Option 1 would only involve landside activities and would not involve any overwater coverage or shading. The new Waterfront Destination Park that could be developed under Option 1 could include new structures, such as restrooms. However, it is anticipated that these structures would be minimal in size and would greatly reduce features that could create permanent additional perches for raptors or other large predatory birds or involve the use of reflective building and glass finishes that may confuse birds in flight, leading to an increase in strikes. Moreover, Option 1 does not include any in-water components, and therefore, would not result in any operational impacts on sensitive marine species. Therefore, impacts associated with operation of Option 1 would be less than significant.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant operation-related impacts on sensitive marine and terrestrial species (**Impact-BIO-6** through **Impact-BIO-9**). These significant impacts would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities under Option 2 would only involve landside activities and would not involve any overwater coverage or shading. The new park space that could be developed under Option 2 could include new structures such as restrooms. However, it is anticipated that these structures would be minimal in size and would not contain features that could create permanent additional perches for raptors or other large predatory birds or involve the use of reflective building and glass finishes that may confuse birds in flight, leading to an increase in strikes. Moreover, Option 2 does not include any in-water components, and therefore, would not result in any operational impacts on sensitive marine species. Therefore, impacts associated with operation of Option 2 would be less than significant.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant operation-related impacts on sensitive marine and terrestrial species (**Impact-BIO-6** through **Impact-BIO-9**). These significant impacts would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities under Option 3 would only involve landside activities and would not involve any overwater coverage or shading. The new park space that could be developed under Option 2 could involve structures such as restrooms. However, it is anticipated that these structures would be minimal in size and would not contain features that could create permanent additional perches for raptors or other large predatory birds or involve the use of reflective building and glass finishes that may confuse birds in flight, leading to an increase in strikes. Moreover, Option 3 does not include any in-water components, and therefore would not result in any operational impacts on sensitive marine species. Therefore, impacts associated with operation of Option 3 would be less than significant.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts that would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS. Rather, the proposed policies are intended to reduce and minimize impacts on biological resources. For instance, the District will enhance, restore, and protect Intertidal and Conservation Open Space use designations (WLU Policy 5.1.2); maintain marine resources in alignment with Section 30230 of the California Coastal Act (ECO Policy 1.1.1); prioritize and pursue opportunities for the protection, conservation, creation, restoration, and enhancement of sensitive habitats and State or Federally listed coastal species (ECO Policy 1.1.2); coordinate, site, and design future development adjacent to conservation areas and other sensitive habitats to avoid impacts where feasible or legally required (ECO Policy 1.1.3); conduct development in coastal waters pursuant to Section 30233 of the California Coastal Act (ECO Policy 1.1.4); for landside development, establish and maintain ecological buffers between the landside development and saltmarsh wetland to preserve and protect the wetland habitat for the anticipated life of the development (ECO Policy 1.1.5); limit development within wetland buffers to minor passive recreational uses or other improvements deemed necessary to protect the habitat, and located the development in portions of the buffer farthest from the habitat (ECO Policy 1.1.6); prohibit planting of invasive species in landscaped areas (ECO Policy 1.1.9); use ecologically sensitive lighting that is shielded and directed away from the water or sensitive habitat areas,

sensor activated, and of the lowest possible color temperature that also meets public safety requirements where development occurs above the water or adjacent to sensitive habitat areas (ECO Policy 1.1.10); encourage the use of biologically engineered stormwater solutions to prevent degradation of coastal wetlands and marine ecosystems and to reduce stormwater pollution to the Bay (ECO Policy 1.1.11); identify locations throughout the Bay that could support habitat enhancement, restoration, creation, and protection to benefit sensitive habitats and State and Federally listed species (ECO Policy 1.1.13); strive to achieve a net increase of wetland habitat acreage from baseline conditions throughout the Bay (ECO Policy 1.1.14); identify various ecological opportunity areas within water use designations that have shallow subtidal or intertidal habitat that may benefit from additional restoration or enhancement, or additional nature-based shoreline stabilization (ECO Policy 1.1.15); provide information to the public about the water quality risks associated with invasive species and about measures to avoid and reduce the spread of invasive species (ECO Policy 1.1.16); support creative and innovative solutions to improve the resiliency of the Bay's marine ecosystems and the biodiversity within Tidelands (ECO Policy 1.1.19); restore historic losses of natural habitat acreages may be, to the extent feasible, part of the sea level rise adaptation and mitigation strategies (ECO Policy 1.1.20); pursue opportunities to create, preserve, enhance or restore inter and subtidal habitats in areas that have historically been impacted by development (ECO Policy 1.1.23); conduct or require permittees and tenants to conduct, long-term monitoring of water, sediment, eelgrass, birds, and marine life in the Bay (ECO Policy 2.1.5); continue partnerships and collaboration with key agencies and stakeholders to enhance conservation, protection, and restoration of natural resources in and around the Bay and Tidelands (ECO Policy 4.1.1); and continue environmental education programs to increase public understanding and appreciation of Tidelands' and the Bay's natural resources and how to protect them (ECO Policy 4.2.1).

Impact Determination and Mitigation

Implementation of the proposed PMPU would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS.

Significant Impacts

Impact-BIO-1: In-Water Construction-Induced Noise Impacts Disrupting Foraging Behavior of Sensitive Avian Species Such as California Least Tern and California Brown Pelican. In-water construction-induced noise impacts from overwater construction activities such as pile driving could disrupt the foraging behavior of the California least tern if construction occurs during the California least tern nesting season, as well as other sensitive fish-foraging avian species such as California brown pelican. This impact would be significant.

Impact-BIO-2: Construction Noise Impacts on Nesting Behavior of Marine-Dependent Species Protected Under the Migratory Bird Treaty Act and California Fish and Game Code.

Construction-induced noise impacts from landside and overwater construction activities can disturb nesting marine dependent bird species protected under the MBTA and California Fish and Game Code. Disturbance can lead to nest abandonment or altered behavior that results in lowered nesting success. This impact would be potentially significant.

Impact-BIO-3: In-Water Pile Driving Activity Could Generate Noise Levels that Could Injure (Level A Harassment) or Alter the Behavior of (Level B Harassment) Marine Mammals, Green

Sea Turtles, and Fishes. In-water pile driving activities could generate enough underwater noise to physically injure marine mammals, green sea turtles, and fishes should impact hammer or vibratory pile driving occur during construction. Any noise-related impacts would be dependent on the type of activity being performed, the proximity to marine waters, and the biology of the considered species. In-water impact hammer or vibratory pile driving activity by comparison could potentially generate enough underwater noise to injure (Level A Harassment) or alter behavior (Level B Harassment) for marine mammals, green sea turtles, and fishes. This impact would be significant.

Impact-BIO-4: Increased Water Turbidity from Disturbance of Submerged Sediments During In-Water Construction Would Limit the Ability of Protected Fish-Foraging Avian Species to Locate Prey and Could Disrupt Eelgrass Productivity. In-water construction activities can suspend sediment that results in water quality and turbidity impacts that limit the ability of fish foraging avian species to locate prey and disrupts eelgrass productivity. Additionally, incidental vessel contact with bottom substrate and vessel propeller wash within shallow areas could result in increased turbidity. This impact would be significant.

Impact-BIO-5: Potential Disturbance or Destruction of Nests Protected by the ESA and/or CESA, Migratory Bird Treaty Act, and California Fish and Game Code. Removal of existing trees and demolition of existing structures, as well as generation of noise, dust, or nighttime lighting from construction activity, could impede the use of breeding sites during the general avian nesting season (February 15 through August 31). The disturbance or destruction of an occupied nest would be considered a significant impact.

Impact-BIO-6: Aquaculture-Raised Shellfish Could Impact Essential Fish Habitat Through Reduction of Available Plankton and Organic Particles and Changes to the Benthic Environment. Aquaculture within the proposed PMPU area allows for the cultivation of shellfish and seaweed. If viewed in the context of available fish habitat and forage, shellfish operations compete with natural populations of fish and invertebrates that consume plankton and organic particles and limit foraging opportunities for coastal pelagic fish species. Additionally, benthic impacts of shellfish aquaculture can result from the presence of gear and equipment, shell debris, and the accumulation of pseudofeces or fouling organisms due to natural processes and dependent upon culture methods. Collectively, these impacts are considered significant.

Impact-BIO-7: Permanent and Long-Term Overwater Coverage from Introduction of New Structures. The introduction of newly constructed berthing structures for commercial and recreational vessels, and vessels using berthing structures, would result in a permanent increase in overwater coverage. In addition, the introduction of large construction-related structures for prolonged periods of time may result in long-term overwater coverage impacts. The overwater coverage in each of these cases would result in a permanent reduction of potential open water foraging habitat for California least tern and other sensitive fish-foraging species. The overwater coverage also leads to lower primary productivity due to shading. The managed and sensitive species of eelgrass would be impacted in areas where overwater cover shades eelgrass. This lost productivity impacts all higher trophic levels due to the lost production of organic carbon. Primary productivity is impacted any time eelgrass is shaded. In the case of landside structures the level of impact is more variable, and the impact will increase with taller structures and with structures that are closer to the water. Structures with a southern aspect (water to north of structure) will have a greater impact relative to structures with other aspects. This impact would be significant.

Impact-BIO-8: Raptors and Other Large Predatory Birds Using Newly Constructed Structures as Perches to Hunt Protected Avian Species in Their Nesting Habitats. Future development projects under the proposed PMPU that would lead to increasing the susceptibility of protected avian species to predation from raptors and other large predatory birds include the addition of landside structures such as hotels, restaurants, and retail, or the addition of nearshore berthing structures. The addition of these structures could inadvertently create permanent additional perches for raptors and other large predatory birds that prey on other marine-based protected species. This impact would be significant.

Impact-BIO-9: Bird Strikes Resulting from Use of Reflective Materials. Use of reflective building and glass finishes may confuse birds in flight, leading to an increase in strikes. Future activities under the proposed PMPU that could result in increased bird strike potential include construction of new hotels and meeting space, restaurants, and retail in PD2 and PD3, if the future new buildings would not be surrounded by existing buildings that are taller. The increased potential for bird strikes would be a significant impact on avian species protected under the MBTA and sensitive and listed species protected under ESA and/or CESA. This impact would be significant.

Mitigation Measures

For **Impact-BIO-1:**

MM-BIO-1: Implement Construction Measures to Avoid or Reduce Noise Impacts on California Least Tern and Other Sensitive Fish Foraging Avian Species. For future development projects that the District determines have the potential to disturb foraging behavior of California least tern and other sensitive fish foraging avian species due to in-water construction activities (e.g., pile driving), the project proponent shall retain a qualified biologist, approved by the District, to monitor onsite construction activities. The project proponent shall take specific actions, as approved by the District, to reduce or temporarily stop noise-producing activities if the qualified biologist identifies that the activities are impacting the foraging behavior of sensitive avian species from April 1, or when the California least terns first appear in the Bay, until the California least terns have left the bay or September 15th. These actions shall include, but not be limited to, the following:

- For all pile driving activities performed during the California least tern nesting season, a qualified biologist shall be on site observing for foraging California least terns. If any California least terns are observed, the qualified biologist shall have the authority to halt or modify pile driving activity to ensure foraging behavior is not altered by construction. Work modifications that may limit pile driving noise impacts may include:
 - Reducing the intensity of pile driving.
 - Placing sound dampening panels on pile driving equipment.
 - Restricting pile driving to periods when sensitive avian species are not present.
- For all pile driving projects that may impact any other sensitive nesting avian species refer to **MM-BIO-2**.

For **Impact-BIO-2:**

MM-BIO-2: Implement Construction Noise Measures to Avoid or Reduce Noise Impacts on Sensitive Nesting Marine-Dependent Avian Species. For future development projects that the

District determines have the potential to disturb sensitive nesting marine dependent avian species, the project proponent shall ensure that nesting bird behavior is not modified during construction activities that generate noises above ambient conditions. The project proponent shall implement the following measures during construction:

- The project proponent shall retain a qualified biologist, approved by the District, to perform a nesting bird survey within 500 feet of the noise-generating activity 1 week prior to the start of construction utilizing heavy equipment, and, if nests are found, the qualified biologist shall perform a survey once per week during construction until use of noise-generating heavy equipment ceases.
- The project proponent shall submit the survey to the District for review and approval of the survey and the buffer area, defined below, if any, prior to the commencement of these activities at the project site.
- The nesting bird survey area shall include the entire limits of disturbance plus a 300-foot buffer for non-raptors and a 500-foot buffer for raptors to ensure indirect impacts would be avoided. The nesting surveys shall consist of a thorough inspection of the project area by a qualified biologist(s). The survey shall occur between sunrise and 12:00 p.m., when birds are most active. If no active nests are detected during these surveys, the qualified biologist(s) shall prepare and submit to the District a letter report documenting the results of the survey. If there is a delay of more than 7 days between when the nesting bird survey is performed and construction activities begin, the qualified biologist shall resurvey to confirm that no new nests have been established.
- If the survey confirms nesting within 300 feet of the disturbance footprint for non-raptors or within 500 feet for raptors, the project proponent shall establish a no-disturbance buffer around each nest site to avoid disturbance or destruction of the nest until after the nesting season or a qualified biologist determines that the nest is no longer active. The size and constraints of the no-disturbance buffer shall be determined by the qualified biologist, at the time of discovery, but shall not be greater than 300 feet for non-raptors and 500 feet for raptors. In addition, if the qualified biologist(s) prepares any subsequent reports, the reports shall be submitted to the District.
- The qualified biologist shall establish a baseline ambient sound level by measuring ambient sound levels during the time of day that work is expected to occur. The monitoring distance from the nest shall be chosen to not disturb the species.
- If noise-generating activities are within 300 feet for non-raptors and 500 feet for raptors and the species behavior is modified due to noise, the qualified biologist shall monitor noise levels daily, during construction activities, at a distance that would prevent the disturbance of the relevant species. Sound levels at nest sites shall not exceed 10 dBA above ambient levels. This monitoring shall occur until the nest is no longer active.
- If sensitive avian species begin nesting within 300 feet for non-raptors and 500 feet for raptors of noise-generating construction and the species behavior is modified, the qualified biologist shall establish a baseline ambient sound level by measuring sound levels at a distance without disturbing the species during a representative construction day. The qualified biologist shall monitor those nests daily during construction activities, until after the nesting season or a qualified biologist determines that the nest is no longer active. If the monitoring shows sound levels more than 10 dBA above the baseline ambient levels

(representative construction noise included), and the species behavior is modified, the qualified biologist shall have the authority to halt or modify construction activity to ensure the behavior of sensitive nesting avian species is not altered by construction noise.

- If the above noted sound thresholds are exceeded, the project proponent shall implement actions recommended by the qualified biologist and approved by the District to reduce sound levels to within thresholds. Example actions to reduce noise include installation of noise barriers with a minimum STC rating of 28, place noise attenuation dampers on equipment, replace or retrofit noisy equipment to reduce noise, stage work to reduce the hourly average equivalent sound level (L_{eq}), and relocate noise-generating activities.
- If the qualified biologist determines that noise cannot be attenuated, noise-generating activities must cease until such time that adequate noise attenuation is achieved, or nesting is complete.

For **Impact-BIO-3**:

MM-BIO-3: Implement a Marine Mammal, Green Sea Turtle, and Fishes Monitoring Program During Pile Installation Activities. Prior to construction activities involving in-water impact hamper pile installation or vibratory pile installation or removal, the project proponent shall prepare a marine mammal, green sea turtle, and fishes monitoring program for implementation. Additionally, the project proponent shall submit the monitoring program to the District for approval 60 days prior to commencing construction involving in-water pile activities and shall include the following requirements within the monitoring program:

- For a period of 15 minutes prior to the start of in-water construction, a qualified biologist, retained by the project proponent and approved by the District, shall monitor an impact radius around the active pile installation areas to ensure that special-status species are not present. The qualified biologist must meet the minimum requirements as defined by the NOAA's *Guidance for Developing a Marine Mammal Monitoring Plan* (2017). The impact radius shall be established by determining the largest zone of influence associated with in-water construction activities occurring that workday.
- The project proponent shall not start work if the qualified biologist observes any special-status species prior to starting pile installation.
- In-water pile driving shall begin with soft starts in accordance with Section 4.5 of the District's *Best Management Practices and Environmental Standards for Overwater Structural Repair and Maintenance Activities for Existing Port Facilities Conducted by the San Diego Unified Port District* (District 2019), gradually increasing the force of the pile driving.
- The qualified biologist shall monitor for avian species, marine mammals, green sea turtles, and fishes within appropriate zones of influence during all pile installation activities in order to identify when any special-status species are approaching or within the appropriate zone of influence, and by coordinating with construction crews to halt pile driving until the species have left this area.

For **Impact-BIO-4**:

MM-BIO-4: Implement Construction Measures to Eliminate Water Quality Impairment Impacts on California Least Tern, Other Sensitive Fish Foraging Avian Species, and Eelgrass. During all in-water construction activities that would disturb sediment, the project

proponent shall implement the following construction measures in accordance with applicable Federal, State, and local regulations, including CWA Sections 401 and 404, Rivers and Harbors Act Section 10, the NPDES permit, and Stormwater Management and Discharge Control Ordinance:

- The project proponent shall implement contractor education for vessel operations. Vessel operators shall be trained that any contact with the bottom from the vessel, barges, anchors, or spuds can suspend sediment that results in water quality and turbidity impacts that limit the ability of fish foraging avian species to locate prey and disrupt eelgrass productivity. Additionally, vessel operators shall be instructed to minimize activities that direct propeller wash toward shallow areas with substrates that can be suspended and result in increased turbidity.
- The project proponent shall deploy a turbidity curtain around the pile driving or other sediment-disturbing activity areas to restrict the visible surface turbidity plume to the area of construction. The turbidity curtain shall consist of a hanging ballast-weighted curtain with a surface float line and shall extend from the surface into the water column without disturbing the bottom based on the lowest tidal elevation and swing of the curtain within the water column. The turbidity curtain shall meet the specifications for design, installation, use, performance, and/or modification outlined in the District's *Best Management Practices and Environmental Standards for Overwater Structural Repair and Maintenance Activities for Existing Port Facilities Conducted by the San Diego Unified Port District* (District 2019). The goal of this measure is to minimize the area in which visibility of prey by California least terns and other sensitive fish foraging avian species (e.g., California brown pelican) is obstructed.
- The project proponent shall follow all regulatory requirements to minimize the reduction in water quality in San Diego Bay. Construction of future development would include preparation and implementation of either a SWPPP in accordance the SWRCB Construction General Permit or a Construction BMP Plan in accordance with the District's JRMP, and compliance with appropriate regulatory permits (as applicable), including the CWA Section 401 Water Quality Certification, CWA Section 404 permit, and Rivers and Harbors Act Section 10 permit. A full explanation of these requirements can be found in Section 4.8.
- If impacts on eelgrass due to water quality cannot be mitigated through contractor education and deployment of silt curtains, the project proponent shall implement mitigation measures for losses to eelgrass in accordance the CEMP and with **MM-BIO-10**.
- The project proponent shall implement **MM-WQ-1**, Monitoring Turbidity and Constituents of Concern During Construction-Related Sediment Disturbance; **MM-WQ-2**, Implement Best Management Practices During Construction-Related Sediment Disturbance; and **MM-WQ-3**, Apply Silt Curtains During Construction-Related Sediment Disturbance, as described in Section 4.8, *Hydrology and Water Quality*

For **Impact-BIO-5**:

MM-BIO-5: Avoid Nesting Season for Birds or Conduct Preconstruction Nest Surveys. To ensure compliance with the ESA and/or CESA, MBTA and similar provisions under Sections 3503 and 3503.5 of the California Fish and Game Code, the project proponent shall conduct all vegetation removal (e.g., ornamental trees), demolition of existing structures, and construction activities between September 1 and February 14 (i.e., outside of the general avian nesting

season). If the District determines that such avoidance is not feasible, the project proponent shall implement the following:

- The project proponent shall retain a qualified biologist who shall conduct a focused nesting bird survey within potential nesting habitat 1 week prior to the start of vegetation removal, demolition of existing structures, and/or construction activities. The project proponent shall submit the survey to the District for review and approval of the survey and the buffer area, defined below, if any, prior to the commencement of these activities at the project site.
- The nesting bird survey area shall include the entire limits of disturbance plus a 300-foot buffer for non-raptors and a 500-foot buffer for raptors to ensure indirect impacts would be avoided. The nesting surveys shall consist of a thorough inspection of the project area by a qualified biologist(s). The survey shall occur between sunrise and 12:00 p.m., when birds are most active. If no active nests are detected during these surveys, the qualified biologist(s) shall prepare and submit to the District a letter report documenting the results of the survey. If there is a delay of more than 7 days between when the nesting bird survey is performed and construction activities begin, the qualified biologist shall resurvey to confirm that no new nests have been established.
- If the survey confirms nesting within 300 feet of the disturbance footprint for non-raptors or within 500 feet for raptors, the project proponent shall establish a no-disturbance buffer around each nest site to avoid disturbance or destruction of the nest until after the nesting season or a qualified biologist determines that the nest is no longer active. The size and constraints of the no-disturbance buffer shall be determined by the qualified biologist, at the time of discovery, but shall not be greater than 300 feet for non-raptors and 500 feet for raptors. In addition, if the qualified biologist(s) prepares any subsequent reports, the reports shall be submitted to the District.

For **Impact-BIO-6**:

MM-BIO-6: Develop a Shellfish Aquaculture Mitigation Program in Coordination with the Appropriate Resource Agencies and the District to Minimize the Potential for Degraded Essential Fish Habitat and Potential Benthic Impacts. Prior to the District's approval of any future aquaculture operation involving shellfish, the project proponent shall prepare and submit to the District for approval a Shellfish Aquaculture Mitigation Program. The project proponent shall prepare the Shellfish Aquaculture Mitigation Program in coordination with the appropriate regulatory and resource agencies, as well as the District, and shall implement the program during project design and operation of the future shellfish aquaculture facility. The removal of organic particles and plankton from the water column, the associated impacts on essential fish habitat, and the potential for benthic impacts shall be mitigated through implementation of the following as part of the Shellfish Aquaculture Mitigation Program.

Mitigation for Impacts on Essential Fish Habitat:

- The project proponent shall prepare a mitigation plan that shall use best available science to evaluate the size of the aquaculture facility, the filtration rates and biomass of the cultured species, the mean phytoplankton biomass and production, and the tidal flushing rates of the facility location to determine potential impacts on organic particulate matter food resources. The mitigation plan shall include:

- An adaptive management strategy that accommodates cultivated shellfish density as necessary without significantly affecting food resources available to other organisms in the Bay.

Mitigation for Benthic Impacts:

- The project proponent shall prepare a mitigation plan that evaluates various benthic impacts as affected by the species, and culture methods utilized, the size of the aquaculture facility, accumulation of materials such as pseudofeces, shell debris, and gear. The mitigation plan shall contain the following elements:
 - A monitoring plan that evaluates the seabed beneath and adjacent to the facility to monitor for bacterial mats, sediment hypoxia, benthic infauna, or other indicators of ecosystem health.
 - An adaptive management strategy that responds to negative indicators of benthic health as described in the monitoring plan to appropriately reduce the cultivated shellfish density, as necessary. Site-specific BMPs are to be developed and implemented during construction and operation of the aquaculture facility to lessen or eliminate potential benthic impacts.

For **Impact-BIO-7**:

MM-BIO-7: Implement Overwater Coverage Mitigation in Coordination with the Appropriate Resource Agencies and the District to Compensate for Loss of Open Water Habitat. For future development projects that may result in the loss of open water habitat or shading, the project proponent shall implement the following:

1. During site-specific environmental review and as required by applicable laws and regulations, the project proponent shall consult with the appropriate resource agencies, including but not limited to, NMFS, CDFW, USFWS, RWQCB, and/or USACE, regarding mitigation of impacts associated with loss of beneficial uses from overwater coverage, loss of open water habitat function, and shading. The project proponent shall secure all applicable permits for the mitigation of overwater coverage prior to commencement of waterside construction. One or more of the appropriate resource agencies may require additional or greater mitigation than specified under options 2.A, 2.B, 2.C, and 2.D of this mitigation measure (see below).
2. For impacts that the District determines are significant, a project proponent shall implement one of the following mitigation options, or a combination thereof. These options provide the minimum mitigation for overwater coverage impacts and/or shading impacts. One or more of the appropriate resource agencies may require additional or greater mitigation than specified in this mitigation measure.
 - A. Remove an amount of existing overwater coverage within San Diego Bay that is equivalent to the proposed project's net increase in overwater coverage. This would replace the area affected by a future project at a 1:1 mitigation ratio, subject to the District's review and approval.
 - B. Restore or create an amount of wetland or eelgrass habitat within San Diego Bay equivalent to the proposed project's net increase in overwater coverage at a suitable location within San Diego Bay, at a 1:1 ratio for wetlands and a 1.2:1 ratio for eelgrass

consistent with the CEMP, which would offset the net increase in overwater coverage by improving the habitat structure and primary productivity at the restoration site. The restoration or creation of wetland or eelgrass habitat shall require the project proponent to prepare a mitigation plan for the District's review and approval. The mitigation plan at a minimum shall include a description of the restoration site, mitigation requirements, planting plan (e.g., transplant sites, donor sites, reference site), restoration methods (e.g., plant collection or purchase, transplant units), timing of the restoration work, and a monitoring program to include a mitigation success criteria. The mitigation project shall secure all applicable permits and all applicable District Real Estate agreements for the mitigation site prior to commencement of construction. Additionally, all fill materials proposed for discharge into San Diego Bay for the development of the mitigation site shall meet the requirements of the USACE's *Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual (Inland Testing Manual)*.

- C. If a suitable mitigation bank within the Coastal Zone that is not yet available becomes available in the future, prior to construction of the proposed project, the project proponent shall purchase saltmarsh wetland or overwater coverage credits to offset the net increase in overwater coverage.
- D. Subject to the Board of Port Commissioners' approval and findings, the project proponent may purchase an amount of credits from the District's shading credit program established pursuant to BPC Policy 735, at a fair market value, equivalent to that of the project's final shading total (i.e., to the satisfaction of the appropriate resource agencies).
- E. For projects where landside structures cause shading of eelgrass, the project proponent shall conduct a shading analysis reviewed by a qualified biologist to determine the time and amount of shading for all eelgrass areas impacted by the shading for the District's review to determine the anticipated impacts on eelgrass. If the shading analysis determines that impacts will occur, then mitigation for the loss of eelgrass will be conducted per the CEMP at a 1.2:1 mitigation ratio based on the amount of impacted eelgrass.
- F. For overwater coverage, a qualified biologist shall conduct eelgrass surveys per the CEMP to determine potential impacts on eelgrass from construction.
 - If pre- versus post-construction eelgrass surveys determine that overwater structures will shade and impact eelgrass, then mitigation for the loss of eelgrass will be conducted pursuant to the CEMP at a 1.2:1 mitigation ratio based on the amount of impacted eelgrass.

For Impact-BIO-8:

MM-BIO-8: Implement Raptor Perching Deterrent Measures on New Structures. Prior to the District's approval of a future development project, the project proponent shall retain a qualified biologist, approved by the District and familiar with local sensitive species, to review the project plans for the following:

1. Proximity of the proposed structure (i.e., within 500 feet) to sensitive avian nesting, loafing, or foraging habitat.

2. Potential for the proposed structure to act as a perch for raptors that may prey on any nearby sensitive avian species.

In the event that the qualified biologist identifies that both of the above conditions exist, the project proponent shall implement one or more of the following mitigation measures to mitigate the impact, as determined by the District.

- Install avian perching deterrents such as spikes on top of structures that can act as perches, such as pilings, building ledges, posts, fences, lights and ornaments.
- Redesign structures and features of structures to prevent perching such as by use of pointed or uneven surfaces and recessing lights and ornaments that protrude from structures.

For **Impact-BIO-9**:

MM-BIO-9: Implement Bird Strikes Reduction Measures on New Structures. Prior to the District's approval of a future development project proposing the use of reflective surfaces and/or glass finishes, building plans shall be reviewed by a qualified biologist familiar with avian species, retained by the project proponent and approved by the District, to verify that the proposed building has incorporated specific design strategies that qualify for Leadership in Energy and Environmental Design (LEED) credits, as described in the American Bird Conservancy's *Bird-Friendly Building Design* (Sheppard and Phillips 2015) or an equivalent guide to avoid or reduce the potential for bird strikes. Final building design must demonstrate to the satisfaction of the qualified biologist and the District, as well as be confirmed by USFWS and/or CDFW, that design strategies, in accordance with the *Bird-Friendly Building Design*, have been incorporated and approved by the District. Design measures shall include, but not be limited to, the following:

- Building Façade and Site Structures
 - Develop a building façade and site design that are visible as physical barriers to birds
- Incorporate elements like windows, netting, screens, grilles, shutters, and exterior shades to preclude collisions
 - Incorporate materials that have a low threat potential based on the Bird Collision Threat Rating and the Bird Collision Threat Rating Calculation Spreadsheet to achieve a maximum total building Bird Collision Threat Rating of 15 or less.
 - Least Threat Potential: Opaque Surface
- Exterior Lighting
 - Fixtures not necessary for safety, entrances, and circulation shall be automatically shut off from midnight until 6:00 a.m.
 - Lighting is to be shaded and face down with a minimum spread to avoid lighting off site.
 - Exterior luminaires must meet these requirements for all exterior luminaires located inside project boundary based on the following:
 - Photometric characteristics of each luminaire shall be mounted in the same orientation and tilt as specified in the project design; and

- The project shall be classified under one lighting zone using the lighting zones definitions provided in the *Illuminating Engineering Society and International Dark Sky Association (IES/IDA) Model Lighting Ordinance (MLO) User Guide* (2011).
- Performance Monitoring Plan
 - The project proponent shall develop a 3-year post-construction monitoring plan to routinely monitor the effectiveness of the building and site design in preventing bird collisions. The post-construction monitoring plan shall include methods to identify and document locations where repeated bird strikes occur, the number of collisions, the date, the approximate time, and features that may be contributing to collisions. The post-construction monitoring plan shall list potential design solutions and provide a process for voluntary corrective action.
 - The project proponent shall provide an annual performance monitoring report demonstrating which design strategies have been incorporated and the results of performance monitoring for review and approval by the District.

Level of Significance After Mitigation

Implementation of **MM-BIO-1** would reduce potential noise-related impacts on foraging California least tern and other sensitive avian species during the nesting season (**Impact-BIO-1**) to less than significant by requiring construction monitoring during the nesting season by a qualified biological monitor. The monitor would have the ability to reduce or temporarily stop noise producing construction activities if those activities were believed to impact or otherwise alter the foraging behavior of California least tern during the nesting season.

Impacts associated with disturbance of nesting avian species (**Impact-BIO-2**), including other sensitive fish feeding avian predators, would be reduced to less than significant by **MM-BIO-2**, which requires preconstruction surveys and buffer zones, if nests are detected, and noise monitoring to ensure that noise levels do not exceed 10 dBA above ambient levels. In the event noise exceedances occur or disruption of nesting behavior is observed, **MM-BIO-2** requires construction modifications, including for example buffers and lastly sound barriers with a minimum STC rating of 28 to be placed between the noise-generating activity and the nest until the noise levels do not exceed 10 dBA above ambient levels.

Implementation of **MM-BIO-3** would reduce impacts from pile-driving activities on marine mammals, green sea turtles, and fishes (**Impact-BIO-3**) to less-than-significant levels by identifying when the species are approaching or within the designated isopleth for Level B harassment and halting in-water pile driving activities until the species has left the construction area.

Implementation of **MM-BIO-4** would reduce impacts associated with **Impact-BIO-4** to less than significant levels by requiring implementation of contractor education and construction measures, such as silt curtains, which will facilitate continued underwater foraging, in accordance with regulations. The measures would also prevent water quality impacts on eelgrass in areas surrounding the activity.

Mitigation measure **MM-BIO-5** would reduce **Impact-BIO-5** during construction activities to less-than-significant levels by requiring all vegetation removal, demolition of existing structures, and construction activities to occur outside of the nesting season (February 15 to August 31), if feasible, as well as the implementation of measures such as preconstruction nesting bird surveys and the

establishment of no-disturbance buffers should active nests be detected. Mitigation measure **MM-BIO-5** would require that all vegetation removal, demolition, and construction occur outside of the nesting season. If it is not feasible for these activities to occur outside the breeding season, work may occur within the nesting breeding season upon approval from the District, with suitable mitigation such as nesting bird surveys and implementing no-disturbance buffers if nests are detected.

Implementation of **MM-BIO-6** would reduce **Impact-BIO-6** to less than significant by requiring future project proponents to develop and implement a Shellfish Aquaculture Mitigation Program that includes specific requirements for addressing potential impacts on managed fish species, essential fish habitat, and benthic communities from shellfish aquaculture operations.

Implementation of **MM-BIO-7** would reduce **Impact-BIO-7** to less-than-significant levels by requiring implementation of any of the following mitigation options or combination, for no net increase in overwater coverage per the CWA: removing overwater coverage in San Diego Bay, restoring or creating eelgrass habitat at a suitable mitigation site of equivalent size and value within San Diego Bay, purchasing credits from a suitable mitigation bank, and/or purchasing credits from the District's shading credit program. Although **MM-BIO-7** would reduce **Impact-BIO-7** to less-than-significant levels, implementation of this mitigation measure would have the potential to result in secondary effects. The removal of overwater coverage could involve demolition of existing piers or other structures within San Diego Bay, which would potentially result in short-term water quality impacts if water quality protection measures were not implemented. However, adherence to regulatory permit requirements associated with Rivers and Harbors Act Section 10 and CWA Sections 401 and 404 would ensure that implementation of this mitigation measure would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade existing water quality. Additionally, it is anticipated that criteria pollutant and greenhouse gas emissions generated by **MM-BIO-7** would be minimal and temporary, and would primarily be associated with construction activities, if any such activities are associated with the mitigation option implemented. Consequently, the overall secondary effects of implementing **MM-BIO-7** would be less than significant.

Impacts associated with addition of new permanent perches that could be used by raptors or other large predatory birds (**Impact-BIO-8**) can be reduced to less than significant by **MM-BIO-8**, which requires installation of features to minimize the use of new structures such as buildings, fences, and pilings by avian predators of sensitive species. For structures built within 500 feet of sensitive species habitat, perch deterrents would be installed to prevent raptors and other predatory birds from perching, thereby reducing predatory pressure on sensitive species.

Implementation of **MM-BIO-9** would reduce impacts from reflective surfaces resulting in bird strikes (**Impact-BIO-9**) to less-than-significant levels by requiring that final building design meet design strategies and performance standards of the *Bird-Friendly Building Design*, and be approved by the District, incorporating strategies to minimize the threat to avian species.

Threshold 2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW, NMFS, or USFWS?

Impact Analysis

Impacts of Water and Land Uses

As described under Section 4.3.3, there are numerous Federal, State, and local laws, regulations, policies, and plans that help reduce impacts on sensitive natural communities from future development projects. They would apply to any future development projects proposed consistent with the PMPU, and include the following:

- **California Eelgrass Mitigation Policy** establishes and supports a goal of protecting eelgrass and its habitat functions. The CEMP includes guidance on defining eelgrass habitat, surveying, mapping, assessing impacts, avoiding and minimizing impacts on eelgrass, and mitigation options. Avoidance and minimization measures included within the CEMP relate to turbidity, shading, circulation, and nutrient and sediment loading impacts. Mitigation options in the CEMP include comprehensive management plans, in-kind mitigation, mitigation banks and in-lieu-fee programs, and out-of-kind mitigation.
- **The Magnuson-Stevens Fishery Management and Conservation Act** is Federal legislation that protects waters and substrates necessary for fish spawning, breeding, feeding, or growth to maturity. Fishery management councils formed under the act designate HAPC that provide notable contributions to ecological processes.

Construction

Marine Resources

Eelgrass beds are both the primary biologically important habitat associated with submerged soft-bottom substrate in San Diego Bay and are managed by NMFS as EFH. In addition, the Magnuson-Stevens Fishery Management and Conservation Act designates HAPC that provide notable contributions to ecological processes. Eastern Pacific HAPC that occur in the planning districts include estuaries (e.g., Otay River), canopy kelp (e.g., Imperial Beach), eelgrass (most planning districts), and rocky reefs. Rocky reefs occur off Imperial Beach, and artificial substrates within San Diego Bay, such as artificial reefs, can be viewed as a surrogate for rocky reef habitat.

Construction of future projects proposed under the PMPU would have the potential to have a substantial adverse effect on sensitive marine habitats such as eelgrass and other sensitive communities that are identified in local or regional plans, policies, or regulations. These future PMPU-related activities may include the construction of new commercial or recreational facilities, installation of new, overwater berthing structures (i.e., boat slips) for recreational and commercial vessels, and construction of new aquaculture or marine technology facilities. Construction-related impacts would only occur during actual construction.

Construction-related impacts that could result from these potential future activities include increased turbidity from support vessels, equipment, and installation of structures. The construction of overwater berthing structures and aquaculture facilities would require in-water construction activities. The operation of vessels over shallow water during construction can decrease light to the

bay floor by increasing turbidity from propeller wash or direct contact with the Bay floor. Suspended particles reduce water clarity and can reduce the light reaching plant and algae cells. When suspended particles settle on primary producers such as periphyton, macroalgae, and eelgrass, they can further continue to prevent light from reaching the plant cells. Additionally, any contact where eelgrass occurs could directly dislodge and remove eelgrass and other vegetation. These construction-related impacts are considered significant (**Impact-BIO-10**).

The measures to reduce construction turbidity impacts on eelgrass beds are the same as those proposed under **MM-BIO-4**. Also, impacts associated with reduced growth and cover of eelgrass or direct removal of eelgrass during construction would be mitigated by mitigation measures identified under **MM-BIO-10**. In addition, construction monitoring for eelgrass would occur in accordance with the CEMP (NMFS 2014) (**MM-BIO-10**). The surveys would monitor for eelgrass before and after construction at both the construction site and a suitable reference area. Implementation of **MM-BIO-4** and **MM-BIO-10** would reduce potential temporary water quality, eelgrass shading, or direct removal impacts on eelgrass (**Impact-BIO-10**) to less than significant.

Terrestrial Resources

As described in Section 4.3.2.3, no sensitive terrestrial vegetation communities or riparian habitat is present within the landside portions of the proposed PMPU area where future development could occur. Therefore, no construction-related impacts on sensitive terrestrial or riparian habitats would occur.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on sensitive marine habitat (**Impact-BIO-10**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 1 would only involve landside improvements associated with the new Waterfront Destination Park that could be developed under this option. As discussed in the analysis above, no sensitive terrestrial vegetation communities or riparian habitat is present within the landside portions of the proposed PMPU area where future development under Option 1 could occur. Therefore, no construction-related impacts on sensitive terrestrial or riparian habitats would occur under Option 1. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 1, and no mitigation would be required.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on sensitive marine habitat (**Impact-BIO-10**). This

significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would only involve landside improvements associated with the expanded Lane Field Setback Park that could be developed under this option. As discussed in the analysis above, no sensitive terrestrial vegetation communities or riparian habitat is present within the landside portions of the proposed PMPU area where future development under Option 2 could occur. Therefore, no construction-related impacts on sensitive terrestrial or riparian habitats would occur under Option 2. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 2, and no mitigation would be required.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on sensitive marine habitat (**Impact-BIO-10**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would only involve landside improvements associated with new park space that could be developed under this option. As discussed in the analysis above, no sensitive terrestrial vegetation communities or riparian habitat is present within the landside portions of the proposed PMPU area where future development under Option 3 could occur. Therefore, no construction-related impacts on sensitive terrestrial or riparian habitats would occur under Option 3. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 3, and no mitigation would be required.

Operation

Marine Resources

Operational impacts on marine resources would potentially include permanent overwater shading of eelgrass beds by newly built permanent overwater structures (e.g., piers, docks), and potentially from newly built landside structures, depending on the height and locations of those structures relative to San Diego Bay and any protected eelgrass beds. The construction of new overwater berthing and/or aquaculture facilities over existing eelgrass beds would result in permanent impacts on EFH, and overwater shading from these structures would prevent sunlight from reaching eelgrass beds below. The construction of landside structures such as new hotels, restaurants, and retail could also induce permanent shading impacts on eelgrass beds, depending on whether the shadow cast by the new structure(s) would fall over existing eelgrass. The expansion of existing buildings could also potentially cause over-shading, especially if the expansion would be added vertically to the building, with new floors being built on top of existing buildings. This would increase the overall extent of the shadow cast by existing buildings, thereby potentially increasing shading of water.

Ultimately, any future development project that causes shading over eelgrass beds would impact eelgrass by reducing the photosynthetic production during the growing season (March to October), and therefore plant production. When reduced to the point below that necessary to sustain the plant, eelgrass beds will die back. This outcome is generally certain for structures that fall directly above eelgrass beds with most if not all eelgrass lost. In some instances, minor amounts of eelgrass can still survive directly beneath structures; however, this would only occur when there are

adequate periods with enough light beneath the structure to reach eelgrass beds. Impacts associated with landside structures are more difficult to predict as the shading varies more over the course of a day as the shadow moves with the passing day and season. In such cases, the potential for eelgrass to persist or recruit to a shaded area is dependent upon the average light regime across days and seasons. Because of the uncertainty regarding the height and other characteristics of future development projects that may be adjacent to San Diego Bay and eelgrass beds, permanent eelgrass shading impacts are considered significant (**Impact-BIO-11**).

To reduce eelgrass impacts, **MM-BIO-10** would be implemented prior to any future development project that has the potential to cause permanent eelgrass shading impacts (**Impact-BIO-11**). This mitigation measure includes all mitigation and monitoring requirements in accordance with the CEMP (NMFS 2014). Implementation of **MM-BIO-10** would reduce these impacts to less than significant.

Terrestrial Resources

As described in Section 4.3.2.3, no sensitive terrestrial vegetation communities or riparian habitat is present within the landside portion of the proposed PMPU area where future development could occur. Therefore, no operation-related impacts on sensitive terrestrial or riparian habitats would occur.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant operation-related impact on sensitive marine habitat (**Impact-BIO-11**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 1 would only involve landside improvements associated with the new Waterfront Destination Park that could be developed under this option. As described in Section 4.3.2.3, no sensitive terrestrial vegetation communities or riparian habitat is present within the landside portion of the proposed PMPU area where future development under Option 1 could occur. Therefore, no operation-related impacts on sensitive terrestrial or riparian habitats would occur under Option 1, and mitigation would not be required for Option 1. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 1, and no mitigation would be required.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant operation-related impact on sensitive marine habitat (**Impact-BIO-11**). This

significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would only involve landside improvements associated with the expanded Lane Field Setback Park that could be developed under this option. As described in Section 4.3.2.3, no sensitive terrestrial vegetation communities or riparian habitat is present within the landside portion of the proposed PMPU area where future development under Option 2 could occur. Therefore, no operation-related impacts on sensitive terrestrial or riparian habitats would occur under Option 2. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 2, and no mitigation would be required.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant operation-related impact on sensitive marine habitat (**Impact-BIO-11**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 could involve improvements associated with new park space that could be developed under this option. As described in Section 4.3.2.3, no sensitive terrestrial vegetation communities or riparian habitat is present within the landside portion of the proposed PMPU area where future development under Option 3 could occur. Therefore, no operation-related impacts on sensitive terrestrial or riparian habitats would occur, and mitigation would not be required for Option 3. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 3, and no mitigation would be required.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts that would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW, NMFS, or USFWS. Rather, the proposed policies are intended to reduce or avoid impacts on sensitive natural communities. For instance, the District will enhance and protect Intertidal and Conservation Open Space use designations (WLU Policy 5.1.2); prioritize and pursue opportunities for the protection, conservation, restoration, and enhancement of sensitive habitats and State or Federally listed coastal species (ECO Policy 1.1.2); coordinate, site, and design future development adjacent to conservation areas and other sensitive habitats to avoid impacts where feasible or legally required (ECO Policy 1.1.3); establish and maintain ecological buffers adjacent to wetland and nearshore sensitive habitats to preserve and protect these environmentally sensitive areas (ECO Policy 1.1.5); prohibit planting of invasive species (ECO Policy 1.1.9); encourage the use of biologically engineered stormwater solutions to prevent degradation of coastal wetlands and marine ecosystems and to reduce stormwater pollution to the Bay (ECO Policy 1.1.11); identify locations throughout the Bay that could support habitat enhancement, restoration, and protection to benefit sensitive habitats and State and Federally listed species (ECO Policy 1.1.13); identify various ecological opportunity areas within water use designations that have shallow subtidal or intertidal habitat that may benefit from additional nature-based shoreline stabilization (ECO Policy 1.1.15); support creative and innovative solutions to improve the resiliency of the Bay's marine ecosystems and the biodiversity within Tidelands (ECO Policy 1.1.19); pursue opportunities to create, preserve, enhance or restore intertidal and subtidal habitats in areas that have historically been impacted by development (ECO

Policy 1.1.23); develop a mitigation credit program to improve habitat quality and compensate for unavoidable wetland losses through the protection, restoration, creation, and enhancement of wetland habitats (ECO Policy 1.2.1); conduct or require permittees to conduct, the long-term monitoring of water, sediment, eelgrass, birds, and marine life in the Bay (ECO Policy 2.1.5); continue partnerships and collaboration with key agencies and stakeholders to enhance conservation, protection, and restoration of natural resources in and around the Bay and Tidelands (ECO Policy 4.1.1); pursue partnerships with regulatory agencies, research institutions, private parties, and NGOs to improve water quality in the Bay and promote public awareness and understanding of water quality issues (ECO Policy 4.1.3); and continue environmental education programs to increase public understanding and appreciation of Tidelands' and the Bay's natural resources and how to protect them (ECO Policy 4.2.1).

Impact Determination and Mitigation

Implementation of the proposed PMPU would have a substantial adverse effect on a sensitive natural community identified in local or regional plans, policies, regulations or by CDFW, NMFS, or USFWS.

Significant Impacts

Impact-BIO-10: Temporary Water Quality and Sedimentation Impacts on Eelgrass Beds During Project Construction. The construction of overwater berthing structures and aquaculture facilities would require in-water construction activities such as pile driving, equipment storage, and barge and other construction vessel operations. These activities would induce temporary water quality impacts in instances where measures provided under **MM-BIO-4** could not prevent impacts on eelgrass beds.

Impact-BIO-11: Permanent Overwater Shading of Eelgrass Beds by Newly Constructed Structures. Operational impacts on marine resources would potentially include permanent overwater shading of eelgrass beds by newly built permanent overwater structures (e.g., piers, docks), and potentially from newly built landside structures, depending on the height and locations of those structures relative to San Diego Bay and any eelgrass beds. Any future development project that causes shading over eelgrass beds would impact eelgrass by reducing the photosynthetic production and therefore plant production. Because of the uncertainty regarding the height and other characteristics of future development projects that may be adjacent to San Diego Bay and eelgrass beds, permanent eelgrass shading impacts are considered significant.

Mitigation Measures

For **Impact-BIO-10**:

MM-BIO-10: Implement Eelgrass Mitigation and Monitoring in Compliance with the California Eelgrass Mitigation Policy. To reduce eelgrass shading or other impacts during construction and operation of future development allowed under the proposed PMPU, the project proponent shall implement the following measures prior to the commencement of any future development project that has the potential to cause temporary or permanent eelgrass impacts, as determined by the District during project-specific environmental review. All mitigation and monitoring requirements shall be performed in accordance with the CEMP (NMFS 2014).

- The project proponent shall retain a qualified biologist approved by the District, to conduct a preconstruction eelgrass survey during the project planning phase prior to commencement of construction activities. Surveys for eelgrass will be conducted during eelgrass growing season (March–October), and results will be valid for 60 days, unless completed in September or October; if completed in September or October, results will be valid until resumption of next growing season. The project proponent shall provide the preconstruction eelgrass survey to the District and the NMFS as well as regulatory points of contact for agencies that will be required to provide project permits such as the CDFW, CCC, USACE, and San Diego RWQCB.
- If the results of project planning (e.g., proposed overwater structures or shading analysis) identify potential impacts on eelgrass, the project proponent shall consult with the NMFS, CCC, USACE, RWQCB, and the District to determine appropriate mitigation to achieve the 1.2:1 eelgrass mitigation ratio specified in the CEMP. A qualified biologist shall then prepare an eelgrass mitigation plan for the District’s review and approval. The qualified biologist shall also submit the plan to the NMFS for review and consultation. The eelgrass mitigation plan shall identify the potential extent of eelgrass impact; the means, methods, and location to mitigate for impacts; and mitigation success criteria; and shall provide a monitoring schedule to monitor for mitigation success.
- Projects may reference a baywide eelgrass survey for planning purposes (i.e., during environmental review), and are required to conduct a preconstruction survey within 30 days of initiating construction per the CEMP.
- The qualified biologist shall also prepare and submit to the District, NMFS, and other pertinent agencies a post-construction eelgrass survey. The post-construction survey shall be conducted within 30 days of completion of construction. If construction ends during the non-growing season (November 1 to February 28), the monitoring shall be delayed until the resumption of the growing season. The post-construction survey shall document the extent of eelgrass impacts following project completion.
- For projects with anticipated long-term impacts on eelgrass where the extent of impact cannot be determined immediately following construction, the qualified biologist shall also perform at least 2 years of annual post-construction eelgrass surveys. The results of the surveys shall be submitted to the District, NMFS, other pertinent agencies for review. These annual surveys shall evaluate if any longer-term or operational impacts were caused to eelgrass. Specifically, the surveys shall be designed to evaluate potential shading, vessel movements or/any other potential impacts.
- The project proponent shall commence implementation of the eelgrass mitigation in accordance with the eelgrass mitigation plan within 135 days of any impacts on eelgrass identified in the post-construction survey report(s).
- The project proponent shall implement mitigation performance monitoring at 0, 12, 24, 36, 48, and 60 months as required by the CEMP and consistent with the eelgrass mitigation plan after completing of eelgrass transplanting or restoration as specified in the eelgrass mitigation plan. All performance standards shall be in accordance with the CEMP.
- In the event that impacts on eelgrass are detected during the 2-year post-construction period, the project proponent shall provide additional mitigation for eelgrass impacts by transplanting eelgrass at a suitable restoration site at a ratio of 1.2:1. Conservative

mitigation planning can avoid this additional mitigation through planning for long-term impacts and providing eelgrass transplantation prior to monitoring and evaluation of all impacts.

In addition, implement **MM-BIO-4**, as described under Threshold 1.

For **Impact-BIO-11**:

Implement **MM-BIO-10**, as described above.

Level of Significance After Mitigation

Implementation of **MM-BIO-10** would reduce potential temporary or permanent eelgrass impacts (**Impact-BIO-10 and Impact-BIO-11**) to less than significant by requiring implementation of various construction measures to reduce turbidity and construction; limiting the staging time of construction vessels, equipment, and structures; and mitigating any loss of eelgrass habitat at a ratio of 1.2:1 as prescribed in monitoring in accordance with the California Eelgrass Mitigation Policy (**MM-BIO-10**). The surveys would monitor for eelgrass before and after construction at both the construction site and a suitable reference area, and, in the event impacts on eelgrass are detected, **MM-BIO-10** requires consultation with the appropriate resource agencies to determine appropriate mitigation to achieve the 1.2:1 eelgrass mitigation ratio specified in the CEMP. In addition, **MM-BIO-10** would reduce impacts from permanent eelgrass shading (**Impact-BIO-11**) to less than significant for similar reasons.

Threshold 3: Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact Analysis

Impacts of Water and Land Uses

As described under Section 4.3.3, there are numerous Federal, State, and local laws, regulations, policies, and plans that help reduce impacts on State or Federally protected wetlands from future development projects. They would apply to any future development projects proposed consistent with the PMPU, and include the following.

- **Section 404 of the CWA** regulates the discharge or dredging in WoUS. An individual permit from the USACE is required for any discharge of dredged or fill material into WoUS. In cases within minimal adverse effects, the USACE can authorize projects under the general permit process as long as the activity meets criteria established under a given general permit.
- **Section 10 of the Rivers and Harbors Act**, also administered by the USACE, requires USACE permits for structures within or over any navigable WoUS.
- **Section 401 of the CWA** requires a project proponent to obtain a water quality certification prior to obtaining any permit from a Federal agency. The purpose of the certification is to ensure the activity complies with all applicable water quality standards.
- **The Porter Cologne Water Quality Act** requires the RWQCB to issue waste discharge requirements for discharges to WoS for fill of wetlands and other waters that are not regulated

by Section 404 of the Federal CWA. In addition, the RWQCB also regulates WoS under Section 401 of the CWA, which requires states to certify that Federally-authorized activities comply with State water quality standards. A Water Quality Certification or a waiver must be obtained from the RWQCB if an activity requiring a Section 404 permit would affect WoS.

- **Article 4 of the California Coastal Act** requires the maintenance and enhancement of marine resources and provides that, “special protection shall be given to areas and species of special biological or economic significance.” Additionally, it specifies that biological productivity of coastal waters, streams, wetlands, estuaries, and lakes be maintained and restored by minimizing adverse effects of wastewater, runoff, groundwater depletion, surface flow interference and encouraging maintenance of vegetation buffer areas and minimizing alteration of streams. The California Coastal Act, Article 4 also provides guidelines for permitting diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes.

Construction

Construction of future projects proposed under the proposed PMPU that would have the potential to have a substantial adverse effect on State or Federally protected wetlands and waters (including, but not limited to, marsh, coastal, etc.) through direct removal, filling, and hydrological interruption include the installation of new, overwater berthing structures (i.e., docks, piers and wharves) for recreational and commercial vessels, as well as the construction of new aquaculture facilities. The impacts associated with overwater coverage from future projects that could be constructed consistent with the water and land uses allowed under the proposed PMPU are analyzed under Threshold 2 and are significant (**Impact-BIO-7**). As discussed under Threshold 2, **MM-BIO-7** would reduce the impact to less than significant. This impact would apply only to coastal waters as there are no construction activities that could occur under the proposed PMPU that would result in adverse effects on protected wetlands. Future PMPU-related activities with potential to impact coastal waters would be regulated under Sections 401 and 404 of the CWA and Section 10 of the Rivers and Harbors Act.

While no specific dredging activities are proposed in the PMPU, it is possible that some berthing facilities would require maintenance dredging or dredging to either allow clearance for vessels using the slips or to ensure safe navigation for vessels calling on the facilities. In the event that dredging is proposed to support future projects that could be constructed consistent with the water and land uses allowed under the proposed PMPU, construction-related impacts could include incidental contact of construction vessels with the bottom of the Bay or eelgrass beds. During dredging, the bottom contact and removal of sediment can cause increases in turbidity. These significant impacts were previously described for other PMPU-related construction activities (refer to **Impact-BIO-4** and **Impact-BIO-10**). As such, **MM-BIO-4** and **MM-BIO-10** would similarly reduce these impacts to less than significant.

Finally, any construction activities that would involve dredging or fill of underwater habitat could directly impact eelgrass, if present, within the footprint of these activities. Dredging habitat containing eelgrass beds would uproot existing eelgrass. Fill of submerged habitats would entirely cover all eelgrass, if present, which would be considered a significant impact (**Impact-BIO-12**). Although the cause of impacts varies among dredging, filling, and shading, the overall impact (i.e., loss of eelgrass) can be mitigated to less-than-significant levels through implementation of **MM-BIO-10**.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on sensitive marine habitat (**Impact-BIO-4, Impact-BIO-10, and Impact-BIO-12**). These significant impacts would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

As discussed in the analysis above, projects that would have the potential to have a substantial adverse effect on State or Federally protected wetlands and waters (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, and hydrological interruption include the installation of new, overwater berthing structures (i.e., docks) for recreational and commercial vessels, as well as the construction of new aquaculture facilities, or any projects that require dredging. Option 1 would not involve any in-water work and would not include any of these types of projects or activities. Therefore, impacts on State or Federally protected wetlands would be less than significant under Option 1. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 1, and no mitigation would be required.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on sensitive marine habitat (**Impact-BIO-4, Impact-BIO-10, and Impact-BIO-12**). These significant impacts would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

As discussed in the analysis above, projects that would have the potential to have a substantial adverse effect on State or Federally protected wetlands and waters (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, and hydrological interruption include the installation of new, overwater berthing structures (i.e., docks) for recreational and commercial vessels, as well as the construction of new aquaculture facilities, or any projects that require dredging. Option 2 would not involve any in-water work and would not include any of these types of project or activities. Therefore, impacts on State or Federally protected wetlands would be less than significant under Option 2. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 2, and no mitigation would be required.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on sensitive marine habitat (**Impact-BIO-4, Impact-BIO-10, and Impact-BIO-12**). These significant impacts would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

As discussed in the analysis above, projects that would have the potential to have a substantial adverse effect on State or Federally protected wetlands and waters (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, and hydrological interruption include the installation of new, overwater berthing structures (i.e., boat slips) for recreational and commercial vessels, as well as the construction of new aquaculture facilities, or any projects that require dredging. Option 3 would not involve any in-water work and would not include any of these types of project or activities. Therefore, impacts on State or Federally protected wetlands would be less than significant under Option 3. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 3, and no mitigation would be required.

Operation

Operational impacts on State or Federally protected wetlands or waters (including, but not limited to, marsh, vernal pool, coastal, etc.) include permanent alteration of Bay water hydrodynamics as a result of newly installed pile clusters. Hydrodynamic impacts associated with structures can result in alterations to currents that cause redistribution of sediment or in some cases stagnation of water and reduced water quality and sediment quality due to deposition. This can lead to direct loss of species that live within or on sediments, impacts on species through smothering or sedimentation over feeding structures, or impacts on species due to degraded water quality. This impact is considered significant (**Impact-BIO-13**). Hydrodynamic impacts cannot be directly mitigated unless the proposed structure is moved to an entirely different location where hydrodynamics would not be anticipated to be significantly altered. It is possible that removing similar structures in another location can improve hydrodynamics at the alternate location, but, given varying conditions across the Bay, it is difficult to assess losses at one site with gains at another. Moreover, what constitutes an improvement at one location may be a detriment at another. Therefore, the impacts associated with altered hydrodynamics would be offset by appropriate out-of-kind mitigation. Mitigation measures that improve water quality, enhance and restore habitat, or purchase of credits at an approved mitigation bank established for similar measures would all be suitable (**MM-BIO-11**). Implementation of **MM-BIO-11** would reduce this impact to less than significant.

Finally, any ongoing dredging of underwater habitat would temporarily lower the ecological value of benthic communities. Studies indicate that the benthic community returns to preconstruction populations within 6 months of dredging. Deepening the Bay means reducing the amount of light available at the bottom because light attenuates rapidly through the water. In turn this means reduced microphytobenthos productivity. Microphytobenthos are single-celled primary producers such as diatoms, cyanobacteria, and green algae that live on or just within soft sediments. Reducing this productivity may lead to reduced secondary productivity of the various invertebrates that live on and within the sediment, resulting in a significant impact (**Impact-BIO-14**). Impacts due to lowered benthic productivity from increasing dredged depths (**Impact-BIO-14**) would be offset by creation of shallow water habitat to increase the value of benthic habitat at another location (**MM-**

BIO-10) or through the same measures noted under **MM-BIO-11**. Implementation of either of these options would reduce **Impact-BIO-14** to less than significant.

Additionally, the construction of new landside structures, along with potential increases in other impermeable surfaces has the potential to alter the current hydrological regime of existing stormwater drainages and outfalls. Increased flow through existing storm drains and addition of outfalls leading into San Diego Bay could mean increased erosion of submerged bottom and habitats such as eelgrass beds in the absence of regulations. However, future development allowed under the proposed PMPU would be required to comply with the District's Stormwater Management and Discharge Control Ordinance (i.e., Article 10) and the JRMP, which include specific requirements for all development and redevelopment activities. Minimum BMPs consistent with the District *BMP Design Manual* require the use of site design BMPs and source control BMPs for all projects. The District's Article 10 also specifically requires pollutant control BMPs for all PDPs, which includes projects falling under the proposed PMPU. Any project considered a PDP would be required to implement pollutant control BMPs, following the hierarchy described in the District's *BMP Design Manual* (retention, partial retention with biofiltration, biofiltration, or flow-through with participation in an Alternative Compliance Program). Stormwater pollutant control BMPs are engineered facilities that are designed to retain (i.e., intercept, store, infiltrate, evaporate, and evapotranspire), biofilter, and/or provide flow-through treatment of stormwater runoff generated on the project site. Additionally, a post-construction SWQMP must be prepared for all projects to identify the project-specific site design and source control BMPs (all projects) and pollutant control BMPs (for PDPs). Compliance with these regulatory requirements would ensure that this potential impact would be less than significant. Please see Section 4.8 for more details.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant operation-related impacts on sensitive marine habitat (**Impact-BIO-13** and **Impact-BIO-14**). These significant impacts would still occur within PD3 under Option 1, as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational impacts on State or Federally protected wetlands or waters (including, but not limited to, marsh, vernal pool, coastal, etc.) include permanent alteration of Bay water hydrodynamics as a result of newly installed pilings, altered depths, and other permanent structures in the water such as dock floats and aquaculture pens. Option 1 would not involve any in-water work or include any of these activities, and impacts would be less than significant. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 1 and no mitigation would be required.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant operation-related impacts on sensitive marine habitat (**Impact-BIO-13** and **Impact-BIO-14**). These significant impacts would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational impacts on State or Federally protected wetlands or waters (including, but not limited to, marsh, vernal pool, coastal, etc.) include permanent alteration of Bay water hydrodynamics as a result of newly installed pilings, altered depths, and other permanent structures in the water such as dock floats and aquaculture pens. Option 2 would not involve any in-water work or include any of these activities, and impacts would be less than significant. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 2, and no mitigation would be required.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant operation-related impacts on sensitive marine habitat (**Impact-BIO-13** and **Impact-BIO-14**). These significant impacts would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational impacts on State or Federally protected wetlands or waters (including, but not limited to, marsh, vernal pool, coastal, etc.) include permanent alteration of Bay water hydrodynamics as a result of newly installed pilings, altered depths, and other permanent structures in the water such as dock floats and aquaculture pens. Option 3 would not involve any in-water work or include any of these activities, and impacts would be less than significant. As such, the impacts identified above for the proposed PMPU would not occur within the boundaries of Option 3, and no mitigation would be required.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts that would have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Rather, the proposed policies are intended to reduce and minimize impacts on wetlands. For instance, the District will enhance and protect Intertidal and Conservation Open Space use designations (WLU Policy 5.1.2); prioritize and pursue opportunities for the protection, conservation, creation, restoration, and enhancement of sensitive habitats and State or Federally listed coastal species (ECO Policy 1.1.2); coordinate, site, and design future development adjacent to conservation areas and other sensitive habitats to avoid impacts where feasible or legally required (ECO Policy 1.1.3); establish and maintain ecological buffers adjacent to wetland and nearshore sensitive habitats to preserve and protect these environmentally sensitive areas (ECO Policy 1.1.5); prohibit planting of invasive species (ECO Policy 1.1.9); encourage the use of biologically engineered stormwater solutions to prevent degradation of coastal wetlands and marine ecosystems and to reduce stormwater pollution to the Bay (ECO Policy 1.1.11); identify locations throughout the Bay that could support habitat enhancement, restoration, creation, and protection to benefit sensitive habitats and State and Federally listed species (ECO Policy 1.1.13); identify various ecological

opportunity areas within water use designations that have shallow subtidal or intertidal habitat that may benefit from additional restoration or enhancement, or additional nature-based shoreline stabilization (ECO Policy 1.1.15); support creative and innovative solutions to improve the resiliency of the Bay's marine ecosystems and the biodiversity within Tidelands (ECO Policy 1.1.19); pursue opportunities to create, preserve, enhance or restore intertidal and subtidal habitats in areas that have historically been impacted by development (ECO Policy 1.1.23); develop a mitigation credit program to improve habitat quality and compensate for unavoidable wetland losses through the protection, restoration, creation, and enhancement of wetland habitats (ECO Policy 1.2.1); conduct, or require permittees to conduct, the long-term monitoring of water, sediment, eelgrass, birds, and marine life in the Bay (ECO Policy 2.1.5); continue partnerships and collaboration with key agencies and stakeholders to enhance conservation, protection, and restoration of natural resources in and around the Bay and Tidelands (ECO Policy 4.1.1); pursue partnerships with regulatory agencies, research institutions, private parties, and NGOs to improve water quality in the Bay and promote public awareness and understanding of water quality issues (ECO Policy 4.1.3); and continue environmental education programs to increase public understanding and appreciation of Tidelands' and the Bay's natural resources and how to protect them (ECO Policy 4.2.1).

Impact Determination and Mitigation

Implementation of the proposed PMPU would have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Significant Impacts

Impact-BIO-4 and **Impact-BIO-10**, as previously described under Thresholds 1 and 2, respectively.

Impact-BIO-12: Direct Loss of Eelgrass from Dredging Activities. Any construction activities that would involve dredging or fill of underwater habitat could directly impact eelgrass if present within the footprint of these activities. Dredging bottom habitat containing eelgrass beds would uproot existing eelgrass. Fill of submerged habitats would entirely cover all eelgrass if present, which would be considered a significant impact.

Impact-BIO-13: Permanent Alteration of Bay Water Hydrodynamics due to the Placement of Pile Clusters. Newly installed pile clusters could result in permanent alteration of Bay water hydrodynamics, which would be considered a significant impact.

Impact-BIO-14: Reduction in the Ecological Value of Benthic Communities from Increased Depths Created by Dredging Activities. Ongoing dredging of underwater habitat would temporarily lower the ecological value of benthic communities, which would be considered a significant impact.

Mitigation Measures

For **Impact-BIO-4**:

Implement **MM-BIO-4**, as described above under Threshold 1.

For **Impact-BIO-10**:

Implement **MM-BIO-10**, as described above under Threshold 2.

For Impact-BIO-12:

Implement **MM-BIO-10**, as described under Threshold 2.

For Impact-BIO-13:

MM-BIO-11: Implement Measures that Improve Water Quality, Enhance Habitat, Restore Habitat, or Purchase Credits in a Mitigation Bank. The project proponent shall implement the following:

1. As required by applicable law or regulation, the project proponent shall obtain permits from the RWQCB and USACE to meet requirements under Sections 401 and 404 of the CWA and Section 10 of the RHA. Appropriate mitigation measures such as those described below shall be developed through consultation with the appropriate resource agencies, including but not limited to, NMFS, CDFW, USFWS, RWQCB, and/or USACE. The mitigation measure(s) shall be described in permit applications filed with the RWQCB and USACE such that they can be incorporated as permit conditions to be implemented by the project proponent. One or more of the appropriate resource agencies may require additional or greater mitigation than specified under options 2.A, 2.B, 2.C, and 2.D of this mitigation measure.
2. Prior to the commencement of construction activities, the project proponent shall implement one of the following mitigation options, or a combination thereof. The below options provide the minimum mitigation for structural fill impacts associated with altered hydrodynamics.
 - A. Remove an amount of existing fill, such as pilings, equivalent to the proposed project's net increase in fill from structures placed within San Diego Bay, which would replace the area affected by the proposed project at a 1:1 mitigation ratio, subject to the District's review and approval.
 - B. Restore or create an amount of wetland or eelgrass habitat equivalent to the proposed project's net increase in fill or fill associated impacts at a suitable location within San Diego Bay at a 1:1 ratio for wetlands and a 1.2:1 ratio for eelgrass consistent with the California Eelgrass Mitigation Policy, which would offset the net increase in fill by improving the habitat structure and primary productivity. The restoration or creation of wetland or eelgrass habitat shall require the project proponent to retain a qualified biologist to prepare and submit a mitigation plan for the District's review and approval, which shall include a description of the restoration site, mitigation requirements, planting plan (e.g., transplant sites, donor sites, reference site), restoration methods (e.g., plant collection or purchase, transplant units), timing of the restoration work, and a monitoring program (e.g., establishment of monitoring and mitigation success criteria). The project proponent shall obtain all applicable permits and all applicable District Real Estate agreements for the mitigation site prior to commencement of construction. Additionally, all fill materials proposed for discharge into San Diego Bay for the development of the mitigation site shall meet the requirements of the USACE' *Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual (Inland Testing Manual)*.
 - C. If a suitable mitigation bank within the Coastal Zone that is not yet available becomes available in the future, prior to construction of the proposed project, the project proponent shall purchase saltmarsh wetland or overwater coverage credits to offset the

proposed project's net increase in fill. The District shall balance the impacts of the fill against the benefits provided by the mitigation bank to determine the appropriate credit purchase required.

- D. Subject to the Board of Port Commissioners' approval and findings, the project proponent may purchase credits from the District's shading credit program established pursuant to BPC Policy 735 at a fair market value. The District shall determine the equivalency of fill impact and shading credit by comparing the ecological and hydrological losses associated with the fill to the increased value of ecosystem productivity achieved through reduced shading.

For **Impact-BIO-14**:

Implement **MM-BIO-10**, as described under Threshold 2, and **MM-BIO-11**, as described above.

Level of Significance After Mitigation

Implementation of **MM-BIO-10** would reduce **Impact-BIO-12** to less than significant by requiring implementation of various construction measures to reduce turbidity and construction monitoring in accordance with the CEMP. Eelgrass surveys before and after construction at both the construction site and a suitable reference area, to determine impacts on eelgrass, would be required, and, in the event impacts on eelgrass are detected, **MM-BIO-10** requires the project proponent to implement appropriate mitigation procedures to achieve the 1.2:1 eelgrass mitigation ratio specified in the CEMP.

Additionally, implementation of **MM-BIO-11** would reduce **Impact-BIO-13** to less than significant by requiring appropriate out-of-kind mitigation as determined by the applicable resource agency(s). Mitigation measures that improve water quality, enhance habitat, restore habitat, or purchase credits in a mitigation bank established for similar measures would all provide suitable mitigation.

Lastly, impacts due to lowered benthic productivity from increasing dredged depths (**Impact-BIO-14**) would be offset by creation of shallow water habitat to increase the value of benthic habitat at another location (**MM-BIO-11**) or improving onsite (**MM-BIO-10**). Implementation of either of these options would reduce **Impact-BIO-14** to less than significant.

Threshold 4: Result in substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites?

Impact Analysis

Impacts of Water and Land Uses

As described under Section 4.3.3, there are Federal, State, and local laws, regulations, policies, and plans that help reduce impacts related to substantial interference with movement of migratory species or wildlife corridors or impedance of the use of native wildlife nursery sites from future development projects. They would apply to any future development projects proposed consistent with the PMPU. Such laws, regulations, policies, and plans include the CEMP, which is summarized above under Threshold 2.

Marine Resources

The waterside portions of the proposed PMPU area contain eelgrass as well as the potential occurrence for protected marine wildlife species such as green sea turtles and several marine mammals. Eelgrass is also a nursery area for many commercially and recreationally important finfish and shellfish (Heck et al. 2003). While the various potential marina developments and landside developments have the potential to impact eelgrass, open water habitat, and special-status wildlife species (see Thresholds 1 through 3 above), potential future uses allowed under the proposed PMPU are typical for San Diego Bay, and the habitat types and species are all common throughout much of the bay. The waterside portions of the planning districts within San Diego Bay do provide resources necessary to support resident and migratory species that spend a portion of their lifecycle within San Diego Bay. These habitats, such as shallow water, eelgrass, and marshes, provide refuge and forage for numerous species. Impacts on these habitats and the native and migratory marine species they support would be similar to **Impact-BIO-3, Impact-BIO-4, Impact-BIO-6, Impact-BIO-7, Impact-BIO-10, Impact-BIO-11, Impact-BIO-12, Impact-BIO-13, and Impact-BIO-14** described under Thresholds 1 through 3 above. Implementation of **MM-BIO-3** would reduce impacts from pile-driving activities on marine mammals, green sea turtles, and fishes to less-than-significant levels by identifying when the species are approaching or within the designated isopleth for Level B harassment and halting in-water pile driving activities until the species has left the construction area. In addition, implementation of **MM-BIO-4, MM-BIO-6, MM-BIO-7, MM-BIO-10, and MM-BIO-11** would reduce impacts related to increased overwater coverage, temporary and permanent impacts on eelgrass habitat, alteration of Bay hydrodynamics, and a reduction in ecological value of benthic communities to less than significant. As such, these mitigation measures would provide protections for these habitats and the sensitive species that inhabit San Diego Bay. Given the lack of obstructions to movement of any native resident or migratory fish, marine mammal, green sea turtle, or other wildlife species and the protections afforded through mitigation measures relative to impacts noted above, impacts would be less than significant after mitigation. Therefore, construction and operation of future PMPU-related projects would not substantially interfere with the movement of any native resident or migratory fish, marine mammal, green sea turtle, or other marine wildlife species, nor would future development allowed under the proposed PMPU interfere with established native resident or migratory wildlife corridors for marine resources.

Terrestrial Resources

Though the landside portion of the proposed PMPU area is predominately urban/developed and vegetation is predominately landscaped ornamental species, the PMPU area does occur along the Pacific Coast Flyway, which is a major migratory route for migrating birds along the Pacific coast. San Diego Bay is an important stopover area and provides feeding grounds for birds during their migration. The Bay also provides important nesting grounds for several special-status birds. Impacts on migratory birds would be similar to **Impact-BIO-1, Impact-BIO-2, Impact-BIO-4, Impact-BIO-5, Impact-BIO-8, and Impact-BIO-9** described under Threshold 1 and are significant.

Implementation of **MM-BIO-1, MM-BIO-2, MM-BIO-4, and MM-BIO-5** would reduce impacts on foraging and nesting birds during construction activities to less-than-significant levels by avoiding and minimizing disturbance during the bird nesting season through preconstruction surveys and buffer zones to protect active nests. Implementation of **MM-BIO-8** would reduce impacts associated with the addition of new permanent perches that could be used by raptors or other large predatory birds to less-than-significant levels. Mitigation measure **MM-BIO-8** also requires installation of

features to minimize the use of new structures such as buildings, fences, and pilings by avian predators of sensitive species. For structures built within 500 feet of sensitive species habitat, perch deterrents would be installed to prevent raptors and other predatory birds from perching, thereby reducing predatory pressure on sensitive species. Implementation of **MM-BIO-9** would reduce potential impacts on migrating birds due to bird strikes to less-than-significant levels by requiring the incorporation of design strategies and performance standards to enable birds to avoid structures. Therefore, potential impacts associated with the movement of any native resident or terrestrial wildlife species or with established native resident or migratory wildlife corridors for terrestrial species, or impedance of the use of native wildlife nursery sites would be less than significant after mitigation.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impacts related to substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites (**Impact-BIO-1** through **Impact-BIO-14**). These significant impacts would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction and operational activities under Option 1 would only involve landside improvements and would not involve any in-water work. As such, the impacts on marine resources identified above for the proposed PMPU would not occur within the boundaries of Option 1. Though the landside portion of PD3 is predominately urban/developed and vegetation is predominately landscaped ornamental species, the planning district does occur along the Pacific Coast Flyway, which is a major migratory route for migrating birds along the Pacific coast. San Diego Bay is an important stopover area and provides feeding grounds for birds during their migration. The Bay also provides important nesting grounds for several special-status birds. Therefore, construction and operation of Option 1 could result in significant impacts as identified in **Impact-BIO-2** and **Impact-BIO-5**. However, these would not be additional or more severe impacts than buildout of the proposed PMPU without Option 1. In addition, it is anticipated that any new structures developed under Option 1 (e.g., restrooms) would be minimal in size and would not contain features that involve the use of reflective building and glass finishes that may confuse birds in flight, leading to an increase in strikes. As such, this significant impact of the proposed PMPU would not occur within the boundaries of Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impacts related to substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites (**Impact-BIO-1** through **Impact-BIO-14**). These significant impacts would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction and operational activities under Option 2 would only involve landside improvements and would not involve any in-water work. As such, the impacts on marine resources identified above for the proposed PMPU would not occur within the boundaries of Option 2. Though the landside portion of PD3 is predominately urban/developed and vegetation is predominately landscaped ornamental species, the planning district does occur along the Pacific Coast Flyway, which is a major migratory route for migrating birds along the Pacific coast. The San Diego Bay is an important stopover area and provides feeding grounds for birds during their migration. The Bay also provides important nesting grounds for several special-status birds. Therefore, construction and operation of Option 2 could result in significant impacts as identified in **Impact-BIO-2** and **Impact-BIO-5**. However, these would not be additional or more severe impacts than buildout of the proposed PMPU without Option 2. In addition, it is anticipated that any new structures developed under Option 2 (e.g., restrooms) would be minimal in size and would not contain features that involve the use of reflective building and glass finishes that may confuse birds in flight, leading to an increase in strikes. As such, this significant impact of the proposed PMPU would not occur within the boundaries of Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impacts related to substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites (**Impact-BIO-1** through **Impact-BIO-14**). These significant impacts would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction and operational activities under Option 3 would only involve landside improvements and would not involve any in-water work. As such, the impacts on marine resources identified above for the proposed PMPU would not occur within the boundaries of Option 3. Though the landside portion of PD3 is predominately urban/developed and vegetation is predominately landscaped ornamental species, the planning district does occur along the Pacific Coast Flyway, which is a major migratory route for migrating birds along the Pacific coast. The San Diego Bay is an important stopover area and provides feeding grounds for birds during their migration. The Bay also provides important nesting grounds for several special-status birds. Therefore, construction and operation of Option 3 could result in significant impacts as identified in **Impact-BIO-2** and **Impact-BIO-5**. However, these would not be additional or more severe impacts than buildout of the proposed PMPU without Option 3. In addition, it is anticipated that any new structures developed under Option 3 (e.g., restrooms)

would be minimal in size and would not contain features that involve the use of reflective building and glass finishes that may confuse birds in flight, leading to an increase in strikes. As such, this significant impact of the proposed PMPU would not occur within the boundaries of Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts associated with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result in substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites with mitigation.

Significant Impacts

Impact-BIO-1: In-Water Construction-Induced Noise Impacts Disrupting Foraging Behavior of Sensitive Avian Species Such as California Least Tern and California Brown Pelican, as described under Threshold 1.

Impact-BIO-2: Construction Noise Impacts on Nesting Behavior of Marine-Dependent Species Protected under the Migratory Bird Treaty Act and California Fish and Game Code, as described under Threshold 1.

Impact-BIO-3: In-Water Pile Driving Activity Could Generate Noise Levels that Could Injure (Level A Harassment) or Alter the Behavior of (Level B Harassment) Marine Mammals, Green Sea Turtles, and Fishes, as described under Threshold 1.

Impact-BIO-4: Increased Water Turbidity from Disturbance of Submerged Sediments During In-Water Construction Would Limit the Ability of Protected Fish-Foraging Avian Species to Locate Prey and Could Disrupt Eelgrass Productivity, as described under Threshold 1.

Impact-BIO-5: Potential Disturbance or Destruction of Nests Protected by the ESA and/or CESA, Migratory Bird Treaty Act, and California Fish and Game Code, as described under Threshold 1.

Impact-BIO-6: Aquaculture-Raised Shellfish Could Impact Essential Fish Habitat Through Reduction of Available Plankton and Organic Particles and Changes to the Benthic Environment, as described under Threshold 1.

Impact-BIO-7: Permanent and Long-Term Overwater Coverage from Introduction of New Structures, as described under Threshold 1.

Impact-BIO-8: Raptors and Other Large Predatory Birds Using Newly Constructed Structures as Perches to Hunt Protected Avian Species in their Nesting Habitats, as described under Threshold 1.

Impact-BIO-9: Bird Strikes Resulting from Use of Reflective Materials, as described under Threshold 1.

Impact-BIO-10: Temporary Water Quality and Sedimentation Impacts on Eelgrass Beds During Project Construction, as described under Threshold 2.

Impact-BIO-11: Permanent Overwater Shading of Eelgrass Beds by Newly Constructed Structures, as described under Threshold 2.

Impact-BIO-12: Direct Loss of Eelgrass from Dredging Activities, as described under Threshold 3.

Impact-BIO-13: Permanent Alteration of Bay Water Hydrodynamics due to the Placement of Pile Clusters, as described under Threshold 3.

Impact-BIO-14: Reduction in the Ecological Value of Benthic Communities from Increased Depths Created by Dredging Activities, as described under Threshold 3.

Mitigation Measures

For **Impact-BIO-1**:

Implement **MM-BIO-1**, as described above under Threshold 1.

For **Impact-BIO-2**:

Implement **MM-BIO-2**, as described above under Threshold 1.

For **Impact-BIO-3**:

Implement **MM-BIO-3**, as described above under Threshold 1.

For **Impact-BIO-4**:

Implement **MM-BIO-4**, as described above under Threshold 1.

For **Impact-BIO-5**:

Implement **MM-BIO-5**, as described above under Threshold 1.

For **Impact-BIO-6**:

Implement **MM-BIO-6**, as described above under Threshold 1.

For **Impact-BIO-7**:

Implement **MM-BIO-7**, as described above under Threshold 1.

For **Impact-BIO-9**:

Implement **MM-BIO-9**, as described above under Threshold 1.

For **Impact-BIO-10**:

Implement **MM-BIO-4** and **MM-BIO-10**, as described above under Thresholds 1 and 2, respectively.

For Impact-BIO-11:

Implement **MM-BIO-10**, as described above under Threshold 2.

For Impact-BIO-12:

Implement **MM-BIO-10**, as described above under Threshold 2.

For Impact-BIO-13:

Implement **MM-BIO-11**, as described above under Threshold 3.

For Impact-BIO-14:

Implement **MM-BIO-10** or **MM-BIO-11**, as described above under Threshold 3.

Significance After Mitigation

Implementation of **MM-BIO-3** would reduce impacts from pile-driving activities on marine mammals, green sea turtles, and fishes (**Impact-BIO-3**) to less-than-significant levels by identifying when the species are approaching or within the designated isopleth for Level B harassment and halting in-water pile driving activities until the species has left the construction area.

Implementation of **MM-BIO-6** would reduce **Impact-BIO-6** to less than significant by requiring future project proponents to develop and implement a Shellfish Aquaculture Mitigation Program that includes specific requirements for addressing potential impacts on managed fish species, essential fish habitat, and benthic communities from shellfish aquaculture operations. In addition, implementation of **MM-BIO-4**, **MM-BIO-7**, and **MM-BIO-10** would reduce impacts related to increased overwater coverage (**Impact-BIO-7**), temporary and permanent impacts on eelgrass habitat (**Impact-BIO-10**, **Impact-BIO-11**, **Impact-BIO-12**), and alteration of Bay hydrodynamics (**Impact-BIO-13**) to less than significant. Impacts due to lowered benthic productivity from increasing dredged depths (**Impact-BIO-14**) would be offset by creation of shallow water habitat to increase the value of benthic habitat at another location (**MM-BIO-11**) or improving onsite (**MM-BIO-10**).

Implementation of **MM-BIO-1**, **MM-BIO-2**, **MM-BIO-4**, and **MM-BIO-5** would reduce impacts on foraging and nesting birds during construction activities (**Impact-BIO-1**, **Impact-BIO-2**, **Impact-BIO-4**, and **Impact-BIO-5**) to less-than-significant levels by avoiding or minimizing disturbance during the bird nesting season through preconstruction surveys and buffer zones to protect active nests. Impacts associated with addition of new permanent perches that could be used by raptors or other large predatory birds (**Impact-BIO-8**) can be reduced to less than significant by **MM-BIO-8**. Implementation of **MM-BIO-9** would reduce potential impacts on migrating birds due to bird strikes (**Impact-BIO-9**) to less-than-significant levels by requiring that final building design meet design strategies with the *Bird-Friendly Building Design* and be approved by the District, by incorporating strategies to minimize the threat to avian species. Therefore, potential impacts associated with the movement of any native resident or terrestrial wildlife species or with established native resident or migratory wildlife corridors for terrestrial species, or impedance of the use of native wildlife nursery sites would be less than significant.

Threshold 5: Conflict with any applicable local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or with the provisions of an applicable adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

Impact Analysis

Impacts of Water and Land Uses

The applicable habitat conservation or natural community conservation plans, as well as local land use plans, policies, ordinances, or regulations adopted for the purpose of protecting biological resources, include the San Diego Bay INRMP (District and U.S. Navy 2013) and San Diego Bay National Wildlife Refuge Comprehensive Conservation Plan (USFWS 2006). The District's collaboration and maintenance of strong working relationships and partnerships with the U.S. Navy and USFWS demonstrates a shared goal of protecting Tidelands and the Bay environment.

The District and the U.S. Navy Southwest Division jointly maintain and implement the INRMP as a long-term collaborative strategy for managing INRMP, and are the primary means by which the U.S. Navy and the District jointly plan natural resources work in San Diego Bay. The INRMP does not carry regulatory authority, but rather is a guide to better, more cost-effective decisions by those involved with the Bay. It includes objectives and policy recommendations to guide planning, management, conservation, restoration, and enhancement of the Bay ecosystems.

The INRMP catalogues the plant and animal species around the Bay and identifies habitat types with the purpose of ensuring the long-term health, recovery, and protection of San Diego Bay's ecosystem in concert with economic, Naval, recreational, navigational, and fisheries needs. The overall goal of the INRMP is to provide direction for the good stewardship that natural resources require, while supporting the ability of the Navy and District to achieve their missions and continue functioning within San Diego Bay.

The INRMP identifies ecosystem management strategies for the Bay's natural resource values viewed in a whole-ecosystem context, and seeks opportunities to better institutionalize the guiding principles of ecosystem management for San Diego Bay. These strategies consist of the following:

- Maintain and improve the sustainability and native biodiversity of ecosystems.
- Administer with consideration of ecological units and time frames.
- Support sustainable human activities.
- Develop priorities and reconcile conflicts.
- Develop coordinated approaches to ecosystem health through partnerships.
- Rely on the best science and data available.
- Use benchmarks to monitor and evaluate outcomes.
- Apply adaptive management.

The goals, objectives, and policies of the proposed PMPU do not conflict with the INRMP objectives related to conservation and enhancement, nor with the management strategies detailed in the plans.

In fact, those objectives and policies strongly support the preservation and proper management of biological resources on Tidelands. The District is responsible for, and committed to, safeguarding its natural resources and the public's access to nature, which is further highlighted in the Ecology Element of the proposed PMPU. The goals, objectives, and policies of the Ecology Element seek to enhance, conserve, and restore natural resources and foster a healthy environment by avoiding development in environmentally sensitive areas and promoting ways to improve existing natural resources within the Tidelands. More specifically, the goals and objectives support the following conservation approaches:

- Requirements for future development adjacent to or otherwise near environmentally sensitive areas.
- Protection, restoration, and conservation of biologically diverse resources.
- Pollution prevention and improving the quality of the land, water, and air.
- Enhanced collaboration with local partners on shared priorities.

Moreover, there are several specific policies within the proposed PMPU that would reduce and minimize impacts related to biological resources, consistent with the overall intent of the INRMP. For instance, the District will continue collaboration with key agencies and stakeholders, including the U.S. Navy and USFWS, to enhance conservation, protection, and restoration of natural resources in and around the Bay and Tidelands (ECO Policy 4.1.1). Additionally, the District will enhance and protect Intertidal and Conservation Open Space use designations (WLU Policy 5.1.2); prioritize and pursue opportunities for the protection, conservation, creation, restoration, and enhancement of sensitive habitats and State or Federally listed coastal species (ECO Policy 1.1.2); coordinate, site, and design future development adjacent to conservation areas and other sensitive habitats to avoid impacts where feasible or legally required (ECO Policy 1.1.3); establish and maintain ecological buffers between landside development and saltmarsh wetland to preserve and protect the wetland habitat for the anticipated life of the development (ECO Policy 1.1.5); prohibit planting of invasive species (ECO Policy 1.1.9); use ecologically sensitive lighting that is shielded and directed away from the water or sensitive habitat areas, sensor activated, and of the lowest possible color temperature that also meets public safety requirements where development occurs above the water or adjacent to sensitive habitat areas (ECO Policy 1.1.10); encourage the use of biologically engineered stormwater solutions to prevent degradation of coastal wetlands and marine ecosystems and to reduce stormwater pollution to the Bay (ECO Policy 1.1.11); identify locations throughout the Bay that could support habitat enhancement, restoration, and protection to benefit sensitive habitats and State and Federally listed species (ECO Policy 1.1.13); identify various ecological opportunity areas within water use designations that have shallow subtidal or intertidal habitat that may benefit from additional restoration or enhancement, or additional nature-based shoreline stabilization (ECO Policy 1.1.15); provide information to the public about the water quality risks associated with invasive species and about measures to avoid and reduce the spread of invasive species (ECO Policy 1.1.16); support creative and innovative solutions to improve the resiliency of the Bay's marine ecosystems and the biodiversity within Tidelands (ECO Policy 1.1.19); pursue opportunities to create, preserve, enhance or restore intertidal or subtidal habitats in areas that have historically been impacted by development (ECO Policy 1.1.23); conduct, or require permittees to conduct, the long-term monitoring of water, sediment, eelgrass, birds, and marine life in the Bay (ECO Policy 2.1.5); and continue environmental education programs to increase public understanding and appreciation of Tidelands' and the Bay's natural resources and how to protect them (ECO Policy 4.2.1). These policies align with the goals and objectives of the INRMP and demonstrate that the

District, through the proposed PMPU's goals, objectives, and policies, is committed to the long-term preservation, enhancement, and rehabilitation of the ecology of the Bay. As such, the proposed PMPU would be consistent with the overall intent of the INRMP to protect biological resources in and around San Diego Bay.

However, as discussed in Thresholds 1 through 4 above, future development that could occur under the proposed PMPU would have the potential to result in significant impacts on biological resources prior to mitigation. Because future development under the proposed PMPU would result in potential short-term impacts on terrestrial and marine biological resources during construction, and the timing, location, and design specifications for future development under the proposed PMPU are not yet known, it cannot be determined with certainty that future development would not conflict with the INRMP, even though development would need to be consistent with the policies of the proposed PMPU. Any significant biological resource impacts from future development are considered a significant impact under this threshold because they would potentially result in a conflict with the INRMP (**Impact-BIO-15**). Implementation of **MM-BIO-1** through **MM-BIO-11**, which are provided under the Thresholds 1 through 4 above, would avoid, minimize, and compensate for biological resources impacts of future development that could occur under the proposed PMPU. These mitigation measures, which address both construction and operational impacts of future development, would preclude conflicts with the INRMP because significant biological resources impacts would be avoided. Therefore, the proposed PMPU would not conflict with applicable local policies or ordinances protecting biological resources, and impacts would be less than significant after mitigation is incorporated.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Navy Pier

As discussed above, implementation of the proposed PMPU, within PD3, would result in significant impact related to conflicts with applicable local policies or ordinances protecting biological resources that apply to the proposed PMPU (**Impact-BIO-15**). This significant impact would still occur within PD3 with inclusion of Option 1, as a result of the same reasonably future that could still occur outside of the option boundary within PD3.

Option 1 would not conflict with the INRMP objectives related to conservation and enhancement, nor with the management strategies detailed in the plan. There are no characteristics associated with Option 1 that would conflict with the INRMP. Therefore, Option 1 would not conflict with local policies or ordinances protecting biological resources, and impacts would be less than significant.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impact related to conflicts with applicable local policies or ordinances protecting

biological resources (**Impact-BIO-15**). This significant impact would still occur within PD3, with the inclusion of Option 2, as a result of the same future development that could still occur outside of the Option boundary within PD3.

Implementation of Option 2 would not conflict with the INRMP objectives related to conservation and enhancement, nor with the management strategies detailed in the plans. There are no characteristics associated with Option 2 that would conflict with the INRMP. Therefore, Option 2 would not conflict with local policies or ordinances protecting biological resources, and impacts would be less than significant.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impact related to conflicts with applicable local policies or ordinances protecting biological resources (**Impact-BIO-15**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would not conflict with the INRMP objectives related to conservation and enhancement, nor with the management strategies detailed in the plans. There are no characteristics associated with Option 3 that would conflict with the INRMP. Therefore, Option 3 would not conflict with local policies or ordinances protecting biological resources, and impacts would be less than significant after mitigation.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in conflicts with applicable local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or with the provisions of an applicable adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Rather, the proposed policies are intended to reduce and minimize impacts related to biological protection regulations, such as the INRMP. For instance, the District will continue partnerships and collaboration with key agencies and stakeholders, including the U.S. Navy and USFWS, to enhance conservation, protection, and restoration of natural resources in and around the Bay and Tidelands (ECO Policy 4.1.1). Additionally, the District will enhance and protect Intertidal and Conservation Open Space use designations (WLU Policy 5.1.2); prioritize and pursue opportunities for the protection, conservation, creation, restoration, and enhancement of sensitive habitats and State or Federally listed coastal species (ECO Policy 1.1.2); coordinate, site, and design future development adjacent to conservation areas and other sensitive habitats to avoid impacts where feasible or legally required (ECO Policy 1.1.3); establish and maintain ecological buffers between landside development and saltmarsh wetland to preserve and protect the wetland habitat for the anticipated life of the development (ECO Policy 1.1.5); prohibit planting of invasive species (ECO Policy 1.1.9); use ecologically sensitive lighting that is shielded and directed away from the water or sensitive habitat areas, sensor activated, and of the lowest possible color temperature that also meets public safety requirements where development occurs above the water or adjacent to sensitive habitat areas (ECO Policy 1.1.10); encourage the use of biologically engineered stormwater solutions to prevent degradation of coastal wetlands and marine ecosystems and to reduce stormwater pollution to the Bay (ECO Policy 1.1.11); identify locations throughout the Bay that could support habitat enhancement, restoration, creation, and protection to benefit sensitive habitats and State and

Federally listed species (ECO Policy 1.1.13); identify various ecological opportunity areas within water use designations that have shallow subtidal or intertidal habitat that may benefit from additional restoration or enhancement, or additional nature-based shoreline stabilization (ECO Policy 1.1.15); provide information to the public about the water quality risks associated with invasive species and about measures to avoid and reduce the spread of invasive species (ECO Policy 1.1.16); support creative and innovative solutions to improve the resiliency of the Bay's marine ecosystems and the biodiversity within Tidelands (ECO Policy 1.1.19); pursue opportunities to create, preserve, enhance or restore intertidal and subtidal habitats in areas that have historically been impacted by development (ECO Policy 1.1.23); conduct, or require permittees to conduct, the long-term monitoring of water, sediment, eelgrass, birds, and marine life in the Bay (ECO Policy 2.1.5); and continue environmental education programs to increase public understanding and appreciation of Tidelands' and the Bay's natural resources and how to protect them (ECO Policy 4.2.1).

Impact Determination and Mitigation

Implementation of the proposed PMPU would have the potential (through the implementation of future projects) to conflict with applicable local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or with the provisions of an applicable adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Significant Impacts

Impact-BIO-15: Potential for Future Projects to Result in a Conflict with the Integrated Natural Resources Management Plan. The PMPU provides the general policy framework for future projects to abide with and has several policies that are intended to protect the environment and the natural resources within the Tidelands. While the proposed PMPU goals, objectives, and policies are not in conflict with the INRMP, it cannot be determined at the programmatic level of analysis contained with this PEIR exactly where and how future projects, consistent with the proposed PMPU, would be implemented. This includes considerations such as the exact location and siting of development projects and related activities such as material laydown and construction staging areas in relation to natural resources and environmentally sensitive areas. Because significant impacts on biological resources were identified under Thresholds 1 through 4, implementation of the proposed PMPU would have the potential to conflict with the INRMP.

Mitigation Measures

For **Impact-BIO-15**:

Implement **MM-BIO-1**, as described above under Threshold 1.

Implement **MM-BIO-2**, as described above under Threshold 1.

Implement **MM-BIO-3**, as described above under Threshold 1.

Implement **MM-BIO-4**, as described above under Threshold 1.

Implement **MM-BIO-5**, as described above under Threshold 1.

Implement **MM-BIO-6**, as described above under Threshold 1.

Implement **MM-BIO-7**, as described above under Threshold 1.

Implement **MM-BIO-8**, as described above under Threshold 1.

Implement **MM-BIO-9**, as described above under Threshold 1.

Implement **MM-BIO-10**, as described above under Threshold 2.

Implement **MM-BIO-11**, as described above under Threshold 3.

Level of Significance After Mitigation

Implementation of **MM-BIO-1** through **MM-BIO-11**, as described under Thresholds 1 through 4, would reduce the potential for any future conflict with the INRMP as a result of the implementation of future projects, consistent with the proposed PMPU, to less than significant. This would be accomplished by mitigating all potential impacts on biological resources from future projects, as analyzed under Thresholds 1 through 4, to less-than-significant levels. Because the goals, objectives, and policies of the proposed PMPU would not conflict with the INRMP and mitigation measures would ensure future projects would not result in any significant impacts on biological and natural resources covered by these plans, **Impact-BIO-15** would be reduced to less than significant.

4.3.5 Cumulative Impact Analysis

A significant cumulative impact on biological resources would occur if the proposed PMPU would contribute to impacts related to sensitive plant or wildlife species, sensitive habitat/natural communities, Federal and State protected wetlands, wildlife movement corridors, or conflicts with applicable local policies or ordinances or applicable adopted habitat conservation plans or natural community conservation plans.

4.3.5.1 Geographic Scope

The geographic area for cumulative terrestrial biological resources impacts to which the proposed PMPU may contribute includes all habitats adjacent to, or otherwise linked to, San Diego Bay. The geographic area for cumulative marine biological resources impacts includes San Diego Bay in its entirety. Past, present, and probable future plans and programs that could contribute to cumulative impacts on terrestrial and aquatic biological resources include those listed in Table 2-2 in Chapter 2 that would allow for waterfront development projects with grading, paving, landscaping, road, and building construction on undeveloped land or otherwise with habitat present, as well as redevelopment projects and in-water development. Marine organisms could be directly affected by construction and/or operation activities in or along the water, including dredging, filling, and wharf demolition/construction. Untreated runoff from construction or operation activities on land into harbor waters via storm drains or sheet runoff also has the potential to contribute to cumulative impacts.

4.3.5.2 Cumulative Effects From Past, Present, and Probable Future Projects

Past development projects have changed the land in and around San Diego Bay and surrounding Downtown area, as well as the Imperial Beach Oceanfront, from a natural and undeveloped setting to a highly urbanized setting with military, residential, commercial, industrial, and recreational uses. The areas surrounding the Bay and the Imperial Beach Oceanfront continue to see an increase in urban density and intensity from recent past and present projects, and probable future projects are expected to continue the area's urbanization. In addition, past development projects, along with present and probable future development projects associated with the plans and programs identified in Table 2-2, have included and continue to include development at or near the waterfront that has cumulatively contributed to direct and indirect impacts on habitat and species of the Bay. Consequently, the vast majority of sensitive habitat that once existed along the bayfront, particularly in the northern and central portions of the Bay, is no longer present. However, there are still areas in the southern portion of the Bay that contain undeveloped wetlands and sensitive habitat. These areas include Sweetwater River, Otay River, Chula Vista Wildlife Reserve, South San Diego Bay National Wildlife Refuge, and Telegraph Creek.

Present and probable future projects would be required to be consistent with the Chula Vista Bayfront Master Plan Natural Resources Management Plan (for future projects along the Chula Vista Bayfront), and the District's and U.S. Navy's INRMP, which identify important sensitive species and habitats in San Diego and in San Diego Bay targeted for preservation. Moreover, present and future projects also would comply with requirements of the Federal and State ESA, MBTA, and MMPA, which contain regulations for the take of any listed species, migratory birds, and marine mammals, and would require that present and probable future projects avoid and/or mitigate potential impacts on these species.

Present and probable future projects do have the potential to further degrade water quality within the geographic scope for cumulative impacts and thus the existing marine habitat. However, specific regulations such as the Stormwater Municipal Permit and the Industrial General Permit are in place that would minimize continued degradation of the existing marine habitat. For example, projects over 1 acre in size are required to prepare and implement a SWPPP, while projects smaller than 1 acre are still required to comply with the applicable water quality regulations and the District's JRMP, depending on the jurisdiction in which the project would be located. The SWPPPs would identify short-term, project-specific BMPs for each project to minimize pollutants and/or sediments traveling via runoff, and long-term BMPs would be implemented based on the required Water Quality Control Plans using a combination of site design BMPs, source control BMPs, and treatment control BMPs. Implementation of both construction and operational BMPs would minimize harm to marine habitat from water runoff.

Moreover, construction of present and probable future projects that involve in-water work such as pile driving have the potential to cause hydroacoustic impacts on fish, green sea turtle, and marine mammals as well as airborne noise impacts on marine mammal species. However, all present and probable future projects would be required to mitigate for these impacts, which could include measures such as surveying for the presence of marine special-status species and monitoring programs to reduce potential impacts during in-water construction.

In addition, marinas, piers, and other structures currently exist throughout San Diego Bay, and recreational, commercial, and industrial boating activities currently occur. Past, present, and probable future projects have increased, and could continue to increase, the overwater coverage throughout the Bay, and could also affect the Bay's water quality, disturb sensitive marine species during pile driving activities, and reduce eelgrass habitat. The increase in overwater coverage reduces the available open water habitat that is used for foraging by fish-eating avian species. Construction activities, accidental spills, bilge pump discharges, and other activities associated with recreational, commercial, and industrial boating uses can contaminate or reduce the clarity of the water in the Bay, which would inhibit the ability of fish-eating avian species such as California least tern to identify prey for foraging. However, all present and probable future projects would be required to mitigate for these impacts, which could entail the implementation of mitigation measures based on an approved mitigation ratio determined by applicable resource agencies, ensuring compliance with CWA Sections 401 and 404 and Rivers and Harbors Act Section 10, or implementing requirements such as bilge pump discharge limitations and spill control plans.

Nevertheless, given the historical loss of sensitive habitat and species that once existed throughout San Diego Bay, cumulative biological resource impacts from past, present, and probable future development projects within the cumulative study area are significant.

4.3.5.3 Project Contribution

Future development allowed under the proposed PMPU would consist of construction and operational activities in both terrestrial and marine environments. Construction-related impacts on marine resources that could occur from future projects consistent with the proposed PMPU would include construction-induced noise impacts, increases in turbidity, and release of particulates and chemicals of concern into U.S. or State waters. Construction-induced noise impacts from landside construction activity and overwater construction activities such as pile driving could disrupt the foraging behavior of California least tern and other sensitive fish-foraging avian species, which, when combined with past, present, and probable future projects, would result in a cumulatively considerable impact (**Impact-C-BIO-1**). Construction noise can also impact marine-dependent species protected under the MBTA and California Fish and Game Code by causing nesting birds to abandon nest sites or alter nesting behavior in ways that lower nesting success, resulting in a cumulatively considerable impact (**Impact-C-BIO-2**). Furthermore, in-water construction activities associated with new vessel slips, and other uses listed in the proposed PMPU Water and Land Use Tables, could generate enough underwater noise to physically injure marine mammals, sea turtles, and fishes. This is particularly true if that construction requires the use of impact hammers or vibratory pile driving, resulting in a cumulatively considerable impact (**Impact-C-BIO-3**). However, the implementation of **MM-BIO-1** through **MM-BIO-3** would reduce the proposed PMPU's contribution to these impacts to less than cumulatively considerable. In-water construction activities that involve bottom sediment disturbance would also potentially result in temporary increases in turbidity, which could limit the ability of California least terns and other sensitive fish-foraging avian species to locate prey. Additionally, disruption to eelgrass can occur due to increased turbidity. Prolonged increases in turbidity can reduce primary productivity associated with eelgrass because the turbid water prevents sunlight from reaching this primary producer and sensitive species. These impacts would be cumulatively significant (**Impact-C-BIO-4**). However, the proposed PMPU's contribution to this impact would be reduced to less than cumulatively considerable with implementation of **MM-BIO-4**, which requires implementation of various construction measures to reduce turbidity and its effects on foraging.

Regarding terrestrial resources, future construction projects under the PMPU have the potential to impact both sensitive species and common avian species protected under the MBTA, California Fish and Game Code, the ESA, and/or CESA during the nesting season from the generation of noise, dust, or nighttime lighting from construction activity, which could impede the use of breeding sites during the avian nesting season, resulting in a significant impact (**Impact-C-BIO-5**). The proposed PMPU's contribution to the impacts on nesting birds would be reduced to less than cumulatively considerable with implementation of **MM-BIO-5**, which requires all projects involving vegetation removal or demolition of existing structures to implement measures such as preconstruction nesting bird surveys and the establishment of no-disturbance buffers should active nests be detected.

In addition, the introduction of shellfish for aquaculture would impact essential fish habitat and associated managed species through the potential reduction of foraging opportunities. Shellfish aquaculture would result in benthic impacts from the presence of gear and equipment, shell debris, and the accumulation of pseudofeces or fouling organisms due to natural processes and dependent upon culture methods (**Impact-C-BIO-6**). The proposed PMPU's contribution to these impacts would be reduced to less than cumulatively considerable with the implementation **MM-BIO-6**.

The possible addition of overwater structures would result in operational impacts such as increased overwater coverage, which can impact foraging opportunities for sensitive fish-foraging species and lowered primary productivity due to shading, which can also impact primary productivity of eelgrass. Similarly, structures on shore that increase shading of water area will lower eelgrass productivity where eelgrass is shaded. These impacts would be cumulatively considerable (**Impact-C-BIO-7**). However, overwater cover from permanent structures can be mitigated in-kind if feasible, or out-of-kind if in-kind options are not available, as required by **MM-BIO-7**. Implementation of **MM-BIO-7** would reduce the proposed PMPU's contribution to this impact to less than cumulatively considerable. The addition of landside and waterside structures could also result in operational impacts by inadvertently creating permanent additional perches for raptors and other large predatory birds that prey on other marine-based protected species, resulting in a cumulatively considerable impact (**Impact-C-BIO-8**). Impacts associated with the addition of new permanent perches that could be used by raptors or other large predatory birds can be mitigated by installing perch deterrents to prevent raptors and other predatory birds from perching, thereby reducing predatory pressure on sensitive species (**MM-BIO-8**). Implementation of **MM-BIO-8** would reduce the proposed PMPU's contribution to this impact to less than cumulatively considerable.

Future PMPU-related development of new landside structures involving the use of reflective building and glass finishes could result in increased bird strike potential if the new buildings would not be surrounded by existing buildings that are taller, which, when combined with development of new high-rise structures from past, present, and probable future projects, would result in a cumulatively considerable impact (**Impact-C-BIO-9**). Implementation of **MM-BIO-9** would reduce the proposed PMPU's contribution to this impact to less-than-cumulatively considerable by requiring that final building design meet design strategies consistent with the *Bird-Friendly Building Design* and approved by the District, by incorporating strategies to minimize the threat to avian species to achieve a maximum total building Bird Collision Threat Rating of 15 or less.

Construction and operation of future projects consistent with the PMPU would have the potential to have a substantial adverse effect on sensitive marine habitats, such as eelgrass and other sensitive communities that are identified in local or regional plans, policies, or regulations, resulting in a cumulatively considerable impact (**Impact-C-BIO-10** and **Impact-C-BIO-11**). Implementation of

mitigation measures **MM-BIO-4** and **MM-BIO-10** would reduce the proposed PMPU's contribution to impacts from temporary increases in turbidity from support vessels, equipment, and installation of structures during construction or direct removal (**Impact-C-BIO-10**) to less than cumulatively considerable, while **MM-BIO-10** would reduce the proposed PMPU's contribution to impacts from permanent eelgrass shading (**Impact-C-BIO-11**) to less than cumulatively considerable. In-water construction and operational activities could also impact State or Federally protected wetlands or waters through dredging or fill of underwater habitat (**Impact-C-BIO-12**), permanent alteration of Bay hydrodynamics (**Impact-C-BIO-13**), and reduction in ecological value of benthic communities from ongoing dredging (**Impact-C-BIO-14**). When combined with in-water construction and operational activities of past, present, and probable future projects, these impacts would be cumulatively significant. The proposed PMPU's contribution to these impacts would be reduced to less than cumulatively considerable with implementation of **MM-BIO-10** and **MM-BIO-11**. Lastly, because future development under the proposed PMPU would result in potentially significant impacts on biological resources, as analyzed in Thresholds 1 through 4, implementation of the proposed PMPU would have the potential to conflict with the INRMP. When combined with development associated with past, present, and probable future projects, these impacts would be cumulatively significant (**Impact-C-BIO-15**). However, the proposed PMPU's contribution to this impact would be reduced to less than cumulatively considerable with the implementation of **MM-BIO-1** through **MM-BIO-11**.

While future landside and waterside development associated with the proposed PMPU would result in significant cumulative impacts on terrestrial and marine resources prior to mitigation, the proposed PMPU's contribution to all impacts would be reduced to less than cumulatively considerable with the implementation of mitigation measures, as described above. In addition, present and probable future projects would also be required to comply with applicable Federal, State and local regulations, including, but not limited to, CWA Sections 401 and 404, Rivers and Harbors Act Section 10, applicable NPDES and other permits, the District's Stormwater Management and Discharge Ordinance, and the California Eelgrass Mitigation Policy, and their permitting and mitigation requirements. Therefore, the contribution of the proposed PMPU to cumulative biological resources impacts would be less than cumulatively considerable after mitigation.

4.3.5.4 Cumulative Impact Determination and Mitigation

The proposed PMPU's incremental contribution to cumulative biological resources impacts would not be cumulatively considerable after mitigation.

Cultural Resources and Tribal Cultural Resources

4.4.1 Overview

This section describes the existing conditions and applicable laws and regulations for cultural resources and tribal cultural resources (TCRs), followed by an analysis of the potential impacts on cultural resources and TCRs that could result from implementation of the proposed Port Master Plan Update (PMPU). Cultural resources include archaeological resources, ethnographic resources, and elements of the historic-era built environment (architectural resources). TCRs are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe,” which are either “included in or determined to be eligible for inclusion in the California Historic Register” or “included in a local register of historical resources” (Public Resources Code [PRC] Section 21074), or are determined by a California Environmental Quality Act (CEQA) lead agency, based on its discretion and substantial evidence, that a resource is a tribal cultural resource based on the criteria used to determine whether a historical resource is eligible for listing in the California Register of Historical Resources (CRHR) set forth in PRC Section 5024.1(c). For the purposes of this Program Environmental Impact Report (PEIR), impacts on cultural resources would be significant if implementation of the proposed PMPU would: (1) cause a substantial adverse change in the significance of a historical or archaeological resource, (2) disturb human remains, or (3) cause a substantial adverse change in the significance of a TCR.

Table 4.4-1 summarizes the significant impacts and mitigation measures (MMs) discussed in Section 4.4.4.4, *Project Impacts and Mitigation Measures*.

Table 4.4-1. Summary of Significant Cultural Resources and Tribal Cultural Resources Impacts and Mitigation Measures

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact CUL-1: Future Construction Activities within the Proposed PMPU Area May Adversely Impact Current and Future Significant Historical Resources	All planning districts	MM-CUL-1: Conduct a Historical Resource Assessment	Significant and Unavoidable	MM-CUL-1 would not eliminate the potential for development in the proposed PMPU area to result in demolition or other adverse change in the significance of a current or future historical resource.
Impact-OPT3-CUL-1: Future Construction Activities Associated with Option 3 May Adversely Impact	PD3	MM-CUL-1, as described above	Significant and Unavoidable	MM-CUL-1 would not eliminate the potential for development in the are proposed under Option 3 to result in demolition or other

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Current and Future Significant Historical Resources Within North Embarcadero				adverse change in the significance of a current or future historical resource.
Impact CUL-2: Future Ground-Disturbing Activities Within the Proposed PMPU Area May Adversely Impact Archaeological Resources that are Historical Resources or Unique Archaeological Resources	All planning districts	MM-CUL-2: Conduct an Archaeological Resource	Significant and Unavoidable	MM-CUL-2 would reduce potentially significant impacts on archaeological resources through measures such as project redesign, data recovery, construction monitoring, and procedures to address unanticipated discoveries. However, this mitigation measure would not eliminate the potential for future development to cause a substantial adverse change in the significance of an archaeological resource.
Impact-CUL-3: Future Ground-Disturbing Activities Within the Proposed PMPU Area May Adversely Impact Tribal Cultural Resources	All planning districts	Implement MM-CUL-2 , as described above. Implement MM-CUL-3: Require Standard Mitigation Measures for Impacts on TCRs	Significant and Unavoidable	MM-CUL-2 would reduce potentially significant impacts on TCRs through measures such as project redesign, data recovery, construction monitoring, and procedures to address unanticipated discoveries. MM-CUL-3 , in the absence of agreement on mitigation measures to TCRs, would ensure that potentially significant impacts on TCRs are avoided through standard mitigation measures set forth in PCR Section 21084.3.

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-C-CUL-1: Future Construction Activities Within the Proposed PMPU Area Could Result in a Cumulatively Considerable Contribution to Adverse Impacts on Significant Historical Resources	All planning districts	Implement MM-CUL-1 , as described above.	Significant and Unavoidable	However, both mitigation measures would not eliminate the potential for future development to cause a substantial adverse change in the significance of a TCR. MM-CUL-1 would not eliminate the potential for development in the proposed PMPU area to result in a cumulatively considerable contribution to the loss or alteration of historical built environment resources.
Impact-C-CUL-2: Future Ground-Disturbing Activities Within the Proposed PMPU Area Could Result in a Cumulatively Considerable Contribution to Adverse Impacts on Archaeological Resources that are Historical Resources or Unique Archaeological Resources	All planning districts	Implement MM-CUL-2 , as described above.	Significant and Unavoidable	MM-CUL-2 would reduce the cumulatively considerable contribution to impacts on archaeological resources from future development in the proposed PMPU area through measures such as project redesign, data recovery, construction monitoring, and procedures to address unanticipated discoveries. However, this mitigation measure would not reduce cumulatively considerable impacts below a level of significance.
Impact-C-CUL-3: Future Ground-Disturbing Activities Within the Proposed PMPU Area Could Result in a	All planning districts	Implement MM-CUL-2 and MM-CUL-3 , as described above.	Significant and Unavoidable	MM-CUL-2 would help ensure that future development in the proposed PMPU area would not result in a cumulatively

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Cumulatively Considerable Contribution to Adverse Impacts on Tribal Cultural Resources				considerable contribution to impacts on TCRs through measures such as project redesign, data recovery, construction monitoring, and procedures to address unanticipated discoveries. MM-CUL-3 , in the absence of agreement on mitigation measures to TCRs, would help ensure that potentially significant impacts on TCRs are avoided through standard mitigation measures set forth in PCR Section 21084.3. However, these mitigation measures would not reduce cumulatively considerable impacts below a level of significance.

4.4.2 Existing Conditions

4.4.2.1 Prehistoric Background

The following outlines the known prehistoric cultural traditions of the region. The approximately 10,000 years of documented prehistory of the San Diego region has often been divided into three periods: Early Period (San Dieguito tradition/complex), Archaic Period (Milling Stone Horizon, Encinitas tradition, and La Jolla/Pauma complex), and Late Prehistoric Period (Cuyamaca and San Luis Rey complexes).

Early Period Complexes

The Early Period encompasses the earliest documented human habitation in the region. The San Dieguito complex is the earliest reliably dated occupation of the area. The assemblage of artifacts associated with the San Dieguito complex has been studied and elaborated upon extensively (Rogers 1939, 1945, 1966; Warren and True 1961; Warren 1967, 1987). The complex correlates with Wallace's (1955) "Early Man Horizon," and Warren subsequently defined a broader San Dieguito tradition (1968). The Harris Site (CA-SDI-149/316/4935B) is located along the San Dieguito River,

and the earliest component of the site is characteristic of the San Dieguito complex (Warren 1966, 1967; Warren and True 1961). Artifacts from the lower levels of the site include leaf-shaped knives, ovoid bifaces, flake tools, choppers, core and pebble hammerstones, several types of scrapers, crescents, and short-bladed shouldered points (Warren and True 1961; Warren 1966, 1967). Little evidence for the San Dieguito complex/Early Man Horizon has been discovered north of San Diego County.

Some researchers interpret the San Dieguito complex as having a primarily, but not exclusively, hunting subsistence orientation (Warren 1967, 1968, 1987; Warren et al. 1998). Others see a more diversified San Dieguito subsistence system as possibly ancestral to, or as a developmental stage for, the subsequent, predominantly gathering-oriented complex denoted as the La Jolla/Pauma complex (cf. Bull 1983; Ezell 1987; Gallegos 1985, 1987, 1991; Koerper et al. 1991).

Archaic Period Complexes

In the southern coastal region of California, the Archaic Period dates from circa 8,600 years before present (BP) to circa 1,300 BP (Warren et al. 1998). The La Jolla/Pauma complex has been identified from the content of archaeological site assemblages dating to this period. These assemblages occur at a range of coastal and inland sites and appear to indicate that a relatively stable and sedentary hunting and gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of San Diego County for more than 7,000 years. La Jolla/Pauma complex sites are considered to be part of Warren's (1968) Encinitas tradition and Wallace's (1955) Milling Stone Horizon. The inland or Pauma complex aspect of this culture lacks shellfish remains, but is otherwise similar to the La Jolla complex and may, therefore, simply represent a non-coastal expression of the La Jolla complex (True 1958; True and Beemer 1982). The content of these site assemblages is characterized by manos and metates, shell middens, terrestrial and marine mammal remains, burials, rock features, cobble-based tools at coastal sites, and increased hunting equipment and quarry-based tools at inland sites. Artifact assemblages can also include bone tools, doughnut stones, discoidals, stone balls, plummets, biface points/knives, Elko-eared dart points, and beads made of stone, bone, and shell. Beginning at approximately 5,500 BP and continuing during the latter half of the Archaic Period, evidence of hunting and the gathering and processing of acorns gradually increases through time. The evidence in the archaeological record consists of artifacts such as dart points and the mortar and pestle, which are essentially absent during the early Archaic Period. The initial and subsequent increasing use of these technologies during the middle and late Archaic Period constitutes a major transition in how the prehistoric populations interacted with their environment in the southern coastal region. The period of this shift, from circa 4,000 to 1,300 BP, has been designated as the Final Archaic Period (Warren et al. 1998).

Late Prehistoric Period Complexes

In the San Diego area, the Late Prehistoric Period has been described as a time characterized by an increased number of sites and "many technological innovations, and new patterns in material culture and belief systems" (McDonald and Eighmey cited in ICF International 2015). This characterization aptly describes the period for the entire San Diego County area. Changes in tool and ornament types, burial practices, and site location choices from those documented for the earlier periods are well documented in the archaeological record and are described below.

As with the earlier periods, archaeologists have defined distinctive complexes for the Late Prehistoric Period prehistoric cultures of the area. Two complexes have been defined for the

protohistoric occupants of the area. One, designated as San Luis Rey, is identified in southern Orange, western Riverside, and northern San Diego Counties; the other, Cuyamaca, is identified in southern San Diego County (Meighan 1954; True 1966, 1970). The San Luis Rey complex is believed to be the progenitor of the Shoshonean-speaking peoples (Luiseño/Juaneño culture) living in the area at the time of historic contact in northern San Diego County (referred to as San Luis Rey of Shoshonean origin) (cf. Koerper 1979). Those of southern San Diego County (Cuyamaca, Yuman), are believed to be the ancestors of the Hokan-speaking Diegueño or Kumeyaay (Ipai/Tipai) occupying southern San Diego County at contact. The demarcation line between the San Luis Rey complex and the Cuyamaca complex is believed to be near the historic separation of the tribal territories of the Luiseño/Juaneño and Diegueño. It is highly unlikely, however, that the boundary remained static over time. During Late Prehistoric times, the entire PMPU area would have been within the area commonly associated with the archaeologically defined Diegueño or Kumeyaay (Ipai/Tipai) complex.

Hearths documented at southern San Diego County sites are often clay lined, yet this type of hearth is not found in the northern county sites. The Luiseño/Juaneño of southern Orange and northern San Diego counties appear to have primarily practiced cremation (Kroeber 1925), but may also have occasionally buried the dead by inhumation. The use of special burial urns for cremations, however, was apparently not commonly practiced.

4.4.2.2 Ethnographic Background

The Kumeyaay who inhabited the southern part of San Diego County, western and central Imperial County, and northern Baja California were the direct descendants of the early Yuman-speaking hunter-gatherers of the Late Prehistoric Period. The Kumeyaay appear to have had considerable variability in their level of social organization and settlement. They were organized patrilineal, patrilocal lineages that claimed prescribed territories but did not own the resources in general. The Kumeyaay occupied bipolar villages during the year and would occupy residential bases in the foothills/mountains during the summer and the lower elevations in the winter, with numerous campsites throughout as they exploited seasonally available resources. Acorns were the most important staple of their diet, as indicated by the presence of numerous large habitation sites near abundant oaks and bedrock suitable for milling. Grass seeds, sages, berries, wild greens, and fruits were eaten. Houses were usually only built for the winter and were conical structures covered with tule bundles or willow and had excavated floors and central hearths. Houses and campsites are believed to have been relatively dispersed with no formal layout or discrete boundaries for structures or campsites. Both pottery and basketry were utilized in addition to stone tools. Religious activities were practiced with the assistance of shaman and a cimul (Carrico 2008, Luomala 1978).

The arrival of Spanish missionaries and soldiers in 1769 began a period of Euro-American exploration and settlement that would forever alter the Kumeyaay way of life. Dual military outposts of the Presidio de San Diego and Mission San Diego de Alcalá were established at Old Town near the village of Cosoy. The Mission system used Native American labor to build a footing for greater European settlement and introduced horses, cattle, agriculture, and new construction materials, methods, and styles. In 1774, the mission was moved 5 miles east, nearer to the Kumeyaay village of Nipaguay in Mission Valley. The Kumeyaay were generally resistant to Spanish attempts to coerce them into the Euro-American culture, but the change in location of the mission enabled the priests to gain more converts. As the Spanish gained influence many of the Kumeyaay became resentful, and this culminated in the sacking and burning of the mission in 1775 (Carrico 2008).

Mexico won its independence from Spain in 1821, and the missions were secularized in 1834. While most Spanish laws and institutions remained intact, the mission lands were divided, and large tracts of land (referred to as ranchos) were given to individuals and families. Cattle ranching and other agricultural activities were the focus of the economy (McGinnis and Baksh 2008). During the Mexican period, the Pueblo of San Diego (including the present planning area) was established on some 48,000 acres of the ex-mission lands, and many of the Kumeyaay who lived near the pueblo center and mission were dispersed as they were deprived of their land (City of San Diego 2001). As the new owners took possession of the ranchos, most Native Americans retreated away from the settlements while a few provided menial labor on the ranchos. However, because of the low population of Euro-Americans, the Kumeyaay were able to maintain a strong degree of autonomy outside of the rancho system (Shipek 1987).

The Mexican period ended when Mexico ceded nearly half of its land, including California, to the United States after the cessation of the war between the two countries in 1848. Soon after, gold was discovered in California and the tremendous influx of Americans and people of many nations quickly drowned out much of the Hispanic cultural influences. The further division of land by the U.S. government and squatting by white settlers deprived Native Americans of their traditional lands and resources (McGinnis and Baksh 2008). After the Civil War ended in 1865 San Diego County saw a huge increase in the number of settlers seeking land, and Native Americans were continually marginalized and forced off their land onto land that was not suitable for subsistence. By the 1870s the situation was very desperate for the Native Americans of San Diego County, and the U.S. government was slow to act. It was not until 1875 that ten reservations were finally established in San Diego County (Shipek 1987).

Native American Use of the Tidelands

San Diego's coastal environment contained a large number of accessible ecological niches. San Diego Bay, rivers, and associated lagoons contained fish and shellfish that were consumed since the Archaic period circa 9,000 years ago (Eigenmann 1892). Archaic archaeological sites are predominantly coastal and include habitation sites, shell dumps, quarries, lithic scatters, and milling stations (Gallegos 1992:205). Archaeological data from the edge of San Diego Bay confirms that the Archaic or La Jollan people relied heavily on local coastal resources including plants, fish, and shellfish, with occasional hunting (Christenson 1992:217–218). Archaeological excavations have produced large numbers of fish and shellfish, bone fishing tools, and limited amounts of terrestrial fauna except for a few sites (Gallegos and Kyle 1988).

Environmental changes occurred during the past 9,000 years in San Diego County that resulted in the rise and eventual stabilization of the level of the sea in the area (Gallegos 1992:212). The sea level rise drowned local coastal valleys and created rich shellfish habitats, while the subsequent stabilization around 3,500 years ago created siltation in the coastal lagoons. This reduced shellfish habitat and caused the depopulation and partial human abandonment of certain coastal lagoon sites. San Diego Bay was the only coastal estuary that did not silt in, thereby continuously providing shellfish and fish along with sea and land mammals (Gallegos and Kyle 1988:ii–iii).

Archaeological remains at the two large coastal sites of Ystagua (Sorrento Valley) and Rinconada (Pacific Beach) show consumption of a wide variety of marine fish, sea mammals, and shellfish (Christenson 1992). Terrestrial resources consumed near the coast included mule deer, sea otter, sea lion, mountain lion, kit fox, harbor seal, crab, bird, reptile, rabbit, rodents, acorns, grass seeds, and other vegetal resources (Christenson 1992, Gallegos 1992:212). Consumed species of shellfish

included Protothaca, Chiton, Chione, Ostrea, Tegula, Crucibulum, Mytilus, Saxidomus, Argopecten, and Astraea (Gallegos 1992:212).

The rocky coast kelp areas, tidal areas, and sloughs were accessed for fish species including sheephead, smoothhound, shovel-nosed guitarfish, bat ray, and pile surfperch (Gallegos and Kyle 1988:ii). California sheephead was most likely caught in kelp beds off of Point Loma using boats and fishing implements, while the presence of sardines suggests the use of netting. Stone tools were acquired from local beach cobbles for the purpose of producing large flakes to use as cutting and scraping tools (Gallegos 1992:212)

The Late Prehistoric Yumans, the ancestors of the Kumeyaay, migrated to the coast from the inland desert around 1,300 years ago, and continued to consume primarily terrestrial resources, such as acorns and rabbits, with marginal use of coastal resources (Christenson 1992:217). Ethnographic data indicates that people lived in coastal areas at the time of European contact, but provide little specific information about them or their activities. Drucker's (1937) Cultural Element Distribution discusses fishing with scoop nets and using tule balsa boats to travel far offshore to catch fish (Englehardt 1920). Luomala (1978) states that coastal bands ate fish caught with hooks, nets, bows, and other tools. These ethnographic data confirm Kumeyaay use of coastal resources, although supplemental to their main terrestrial economy.

Overall, the Archaic period more heavily utilized coastal resources while shifts in environment and population in the Late Prehistoric period relied more on terrestrial resources.

4.4.2.3 Historic Background

San Diego Harbor, the City Port Department, and the San Diego Unified Port District

Nineteenth Century

Although San Diego's population and development remained centered in Old Town north of the harbor and Tidelands during the first half of the nineteenth century, both spread south during the second half of the century. During the first half of the century, Native Americans made use of the marshy Tidelands south of Old Town, but European colonists, Hispanic settlers, and American newcomers did not frequent these areas. During the 1850s, William Heath Davis failed in his attempt to promote "New Town San Diego" on land near Punta de los Muertos at today's Downtown harbor front. In 1867, Alonzo Horton purchased 800 nearby acres and created a second New Town San Diego. By 1870 it had 2,300 residents and a growing number of hotels, warehouses, and industrial and residential buildings. During the early 1880s, construction of the California Southern Railroad, a subsidiary of the Atchison, Topeka and Santa Fe Railway (Santa Fe), between National City and San Bernardino to the north provided San Diego with its first transcontinental railroad connection. Railroad development contributed to a boom-to-bust cycle of real estate speculation and population growth followed by falling land prices and population decline across Southern California (ICF International 2016:15-16).

The boom led to the establishment of several communities around the Tidelands of San Diego Harbor. Frank Kimball, who led the effort to bring the long-distance railroad line to San Diego along with his brother Warren, created the settlement that became National City. The San Diego Land and Town Company promoted land sales both in National City, which was incorporated in 1887, and in

the area to the south that became the agricultural community of Chula Vista, which was not formally incorporated until 1911. Across the harbor from San Diego, Elisha Babcock's and Hampton Story's Coronado Beach Company began selling lots in 1886, and the iconic Hotel Del Coronado was completed in 1888. Two years later, Coronado residents voted to incorporate. By then the Coronado Belt Line Railroad provided service from San Diego south through National City and Chula Vista, around the southern Bay, and north to the new seaside resort city. Although not incorporated until 1956, Imperial Beach was created as South San Diego Beach by real estate developer R. R. Morrison in 1887. George Chaffey acquired some of Morrison's land for subdivision and began promoting it as a summertime coastal resort for residents of Imperial Valley (City of Chula Vista et al. 1986:6-7, 49; Coronado Historical Association 2017; City of Imperial Beach 2017; McDrew 1922:380-381, 383, 392; Pourade 1964:210-211).

By the height of the land boom in the late 1880s, San Diego had six privately developed wharfs located between G Street and Commercial Street. The City of San Diego constructed no major wharfs until the twentieth century. In 1891, the War Department improved the navigation channel north of Ballast Point. At that time San Diego had limited industrial activity, and its exports were largely limited to hinterland agricultural products and sand and rock mined at Ballast Point. At the end of the decade, the Zuniga Jetty was built south from the west end of North Island at the harbor entrance (Harbor Department 1948:65; Irwin 1970:11-12; Sanborn Map Company 1888).

Twentieth Century through World War II

San Diego Bay was developed into a modern harbor during the first half of the twentieth century. Although San Diego lagged behind other California ports in export shipping, the natural advantages of its harbor attracted economically transformative military development as well as important waterfront industrial, commercial, and civic development.

Municipal involvement in the development of San Diego Harbor began in the 1910s. In 1911, the State of California instituted a policy of handing over control of Tidelands to local governments that agreed to invest at least \$1,000,000 in Tideland improvements. As a result, San Diego voters approved \$1,000,000 and \$400,000 bond issues for harbor improvements in 1912 and 1914, respectively. In May 1919, the City of San Diego's first mayor-appointed Harbor Commission and Port Director began managing the Tidelands within the city limits. The State granted local Tidelands to National City in 1917, to Coronado in 1923, and to Chula Vista in 1925. (ICF International 2016:16, Reupsch 1970a:2-3, District 1974:2-3.)

In preparation for construction of the first municipal wharf, the City of San Diego arranged for dredging of a 30-foot-wide channel from the shoreline near the west end of D Street (today's Broadway Street) to the harbor's main channel. Eventually known as the Broadway Pier, this municipal wharf was completed in early 1916 along with a 2,675-foot bulkhead and a 60-acre expanse of hydraulic fill that included Harbor Drive. In 1926 the City completed construction of a second municipal pier, the B Street Pier. Also known as the Embarcadero Piers, the Broadway and B Street Pier structures do not retain their original headhouses and warehouses today. Completed in 1919, John D. Spreckels' San Diego and Arizona (SD&A) Railroad, which was later renamed the San Diego and Arizona Eastern (SD&AE) Railway, provided the city with a railroad connection to the agriculturally rich Imperial Valley. However, the railroad did not substantially increase exports from San Diego Harbor. Imports dominated the harbor's trade through the 1920s, though they declined dramatically during the Great Depression of the 1930s, and by the end of that decade, San Diego's

commercial shipping volume ranked 23rd of the 24 West Coast ports (ICF International 2016:16–18).

Federal military investment led the way in shaping San Diego harbor and generating local economic growth during the first half of the twentieth century. Lobbying efforts by Congressman William Kettner and other local officials and business representatives convinced the Navy to invest heavily in San Diego. Citizens voted to lease or deed extensive Tideland acreage for Naval development. During 1916–1917, the first West Coast Marine Corps Advance Base, the Naval Hospital, and Rockwell Field (later the North Island Naval Air Station) were established in San Diego. After World War I, Navy planners became convinced that Japan posed the greatest immediate threat to U.S. interests and committed to moving half of the nation’s fleet to the West Coast. San Diego became the home of the Pacific Destroyer Force. By the mid-1920s, the Federal government had completed or begun developing the Destroyer Base (today’s Naval Base San Diego), the Naval Training Station, the Eleventh Naval District Supply Center, the Marine Corps Recruit Base, the Naval Radio Station, the Fleet Fuel Depot, the U.S. Coast Guard Base, and Fort Rosecrans. In conjunction with the Navy’s plans for increased harbor dredging to accommodate aircraft carriers, San Diego voters approved a \$650,000 bond in 1928 to develop the first phase of the airport north of the Embarcadero Piers that would become Lindbergh Field, which would provide for new aircraft research and development nurtured by Naval aviation needs (Harbor Department, City of San Diego [Harbor Department] 1948:50–51, ICF International 2016:19, District 1974:2–3).

Economic and population growth driven largely by military investment fostered industrial, commercial, and civic development along the San Diego waterfront. A thriving commercial fishing industry took shape during these decades in San Diego harbor along with a recreational sport fishing culture. Supporting Tideland canneries, the fishing industry focused largely on tuna production but also included lobster, shrimp, and sardine production. Fishing boosted demand for vessels, which was met by a flourishing boat and shipbuilding industry centered at Tideland facilities around 28th Street. Along the largely industrial waterfront extending from the Naval Supply Center near the Embarcadero Piers southeast to 28th Street, Tideland acreage was also occupied by steel and iron manufacturers, lumber and other building material yards, oil facilities, and other industrial operations. During the Great Depression years of the 1930s and World War II, Federal public works agencies such as the Civil Works Administration (CWA) and Works Progress Administration (WPA) helped finance harbor improvements such as channel dredging, Tideland fill to expand the waterfront, and development of wharfs and mole piers. Funded by the WPA and designed by noteworthy San Diego architects William Templeton Johnson, Richard S. Requa, Louis J. Gill, and Samuel Hamill, the original San Diego Civic Center (now the County Administration Center) was completed at a waterfront site north of Ash Street facing Harbor Drive in 1938 (City of San Diego 2007:29–30; Harbor Department 1948:26–28, 32–40, 70–78).

Post-World War II

This subsection briefly addresses major events in Tideland planning, management and development. More detailed historical background discussion pertaining to the PMPU area is provided below.

During the post-World War II decades of the historic period, the City of San Diego undertook to make its harbor a more competitive commercial shipping port. Its new Port Director, John Bate, spearheaded this effort as well as the creation of the Unified Port District, which provided for integrated planning and management of the Tidelands within the Cities of Chula Vista, Coronado, Imperial Beach, National City, and San Diego. Established harbor-related enterprises such as

commercial fishing, canning, sport fishing, and shipbuilding endured to different degrees after World War II. During this period, recreation and tourism became increasingly important elements of harbor planning and development.

Although the 1908 city plan created for San Diego by renowned city planner John Nolen—and updated by Nolen in 1926—was never implemented, as historian Richard Pourade notes, post-war harbor development under Director Bate, “made a concession to the [Nolen] Plan, and to the lure of recreational attractions, by dividing the waterfront for three uses.” While industry would be concentrated largely at the waterfront from Market Street south to National City, Tidelands from Market Street “north to a point just beyond the City-County Administration building were assigned to commerce, with commercial piers extending out from in front of the Administration building . . . Between the commercial piers and the Coast Guard Station was to be a small protected harbor for the commercial fishing fleet.” Commercial fishing was also concentrated at the G Street Mole, constructed in 1944. “Recreation,” explains Pourade, “was to be assigned to the lee side of Point Loma, behind the two sheltering arms of a narrow island-like area which had been built up with sand from dredging operations and connected to the mainland by a causeway.” (Reupsch 1970a:5; Pourade 1977:80–81 [quoted], 82, 111–112.)

The narrow island described by Pourade was one of two major new land masses created through placement of dredged material from channel deepening efforts and developed into important new recreational resources. Completed in 1950, Shelter Island was the product of channel dredging for the yacht basin at the harbor side of Point Loma, which produced fill used to expand an existing shoal into a 300-foot-wide and over 1-mile-long landmass connected to Point Loma by a causeway. Mocked by skeptics as “Bate’s Folly,” Shelter Island and the fishing facilities, marinas, yacht clubs, hotels, restaurants, and other commercial enterprises developed there would become important elements of San Diego’s harbor economy and recreational culture. In 1961, dredging to deepen the channel from the harbor entrance to North Island aircraft carrier facilities provided spoil used to create Harbor Island south of Lindbergh Field. Beginning in the late 1960s, Harbor Island would be developed with hotels, restaurants, and other recreational facilities. Shelter Island and Harbor Island would support a growing local tourism economy nurtured by development of new facilities at Lindbergh Field, which enabled the airport to accommodate increases in the number of annual travelers from 390,427 in 1952, to 1,900,000 in 1965–1966, to 4,441,619 in 1974. (Gross 1983: A-14, ICF International 2016:24, District 1974:4; Reupsch 1970a: 8–9.)

Director Bate’s efforts to increase the volume of trade and waterborne shipping through the harbor led to the creation of major new port facilities beginning in 1958. Voter-approved bonds funded the development of the Tenth Avenue Marine Terminal (TAMT), which opened for business with two large transit sheds in 1958. Whereas the old Embarcadero Piers had 240,190 feet of storage space, by 1964 additional construction had equipped the TAMT with approximately 1,000,000 square feet of storage space and a state-of-the-art bulk loader system. At that time the newly formed Unified Port District announced plans for development of a Twenty-Fourth Street Marine Terminal at Tidelands in National City. Voters approved the new terminal with passage of Proposition J, and construction began in 1968. The new terminal would become known as the National City Marine Terminal and would eventually be expanded into a modern container-handling facility. (ICF International 2016:22–23, 24–25; District 1974:6–7.)

The concept of a San Diego Unified Port District (District) encompassing all the harbor-fronting municipalities had been suggested in 1956 by then California Attorney General and subsequent Governor Edmund G. “Pat” Brown. Bate embraced and promoted the concept. For harbor-front

municipalities other than the City of San Diego, unification offered a way to benefit from Tideland development without excessive taxation. The State Legislature and local voters approved the new special district in 1962. Although a lawsuit filed by the City of Coronado kept it from appointing a commissioner until 1964, the District began operations in 1963. The agency's management structure included a Port Director, a position occupied by Bate for several years, the Director's staff, and the Board of Port Commissioners (Board), the District governing body formed of seven commissioners appointed by municipalities with Tideland assets along the Bay. The City of San Diego received three commission seats, and the Cities of Chula Vista, Coronado, Imperial Beach, and National City each received one seat. The District administration was organized into three departments: Marine Terminals, Airport, and Property Management. These departments were supported by the District's Departments of Personnel, Financial Services, Community Relations, Public Works, and Harbor Police. In 1965 the District's administrative offices were relocated from the former Harbor Department headquarters at Harbor Drive and Ash to the former Consolidated Vultee Aircraft building on Pacific Highway. The following year, Don Nay succeeded Bate as Port Director. (ICF International 2016:24, District 1974:5, Reupsch 1970b:3.)

Into the 1970s and subsequent decades, recreation and tourism grew in importance both as elements of the District's purview and as factors in the San Diego economy. In 1972, the redeveloped Broadway Pier was opened as a maritime park and cruise ship facility. On Harbor Island and District lands between the TAMT and the Broadway Pier, developers constructed an increasing number of hotels, and the District developed new parks, public streetscapes, and commercial spaces. The District also created new marina facilities at Chula Vista and National City. In 1982 the District initiated a policy in which 0.37% of annual gross revenue would be invested in public art for Tideland properties. The District installed the first public artwork under this policy, a sculpture entitled "Morning" by renowned San Diego sculptor Donal Hord, in 1983 at North Embarcadero Marina Park. In 1989 the District completed the San Diego Convention Center, which would later be expanded to nearly double its original size. (Frost 2002:6-15, District 1974:7.)

Today the Port of San Diego is the fourth largest California port. The District continues to manage the National City terminal, the TAMT, cruise ship terminals, and Tideland areas with industrial land uses. District-managed Tidelands also contain hotels, marinas, and parks. (District 2016:6.)

History of the Planning Districts

Planning District 1: Shelter Island

The Shelter Island Planning District (PD1) is located on the west side of San Diego Harbor, along the east shore of Point Loma. It includes Shelter Island and its causeway connecting to Point Loma, the America's Cup Harbor on the northeast side of the causeway (East Shelter Island), the Yacht Harbor and Qualtrough Street Mole southwest of the causeway (West Shelter Island), and surrounding marina-front Tidelands.

The first yacht club operated in PD1 was the San Diego Yacht Club, which in 1924 acquired a wharf and waiting room at Talbot Street that had served as a landing for the ferry running from the foot of Broadway to Point Loma. In 1934, dredging created a new anchorage area and generated material to fill 7.5 acres at the foot of Talbot Street. The Yacht Club leased the fill site and relocated its old clubhouse there from Coronado. (Reupsch 1970:3-4.)

Shelter Island was created in 1950. The Harbor Department dredged a new 400-foot-wide, 20-foot-deep channel to the 200-acre Point Loma yacht basin. The Harbor Department placed fill material from the dredging to create a 2,150-foot-long and 400-foot-wide causeway extending southwest from Byron Street. An existing shoal enlarged with fill to connect to the causeway created the so-called island, a 300-foot-wide land mass stretching over a mile in length and rising 14 feet above mean low tide. Promptly initiating infrastructure improvements to Shelter Island, the Harbor Department landscaped the site and planted it with palm trees, constructed streets and parking lots, and built a municipal pier and public boat launching ramp at the outboard or harbor-side portion of the island. The inboard, marina-side of the island was leased to private interests such as yacht clubs, hotels, restaurants, shops, marinas, and marine sales, repair, and rental businesses. In 1951, the Southwestern Yacht Club relocated from Harbor Drive to the Qualtrough Street Mole at the southern yacht basin on the inboard side of Shelter Island. The Harbor Department invested over \$2,000,000 in the creation of Shelter Island, including \$300,000 in dredging and fill work (District 1982:12-13; District 1974A:6).

Along with Mission Bay, Shelter Island became a focal point of Tiki Modern-style architecture (also known as Tiki-Polynesian or Atomic Tiki) and Polynesia-inspired popular culture in California during the 1950s and 1960s. Tiki Modern invoked the “south seas” locales experienced by Pacific-theater World War II veterans, as Hawaii was incorporated into the Union as the 50th state (1959). San Diego promoted itself as a tourist destination with a well-established culture of yachting, sport fishing, and other forms of coastal leisure activities. Beginning in 1953, construction of the first two privately developed leases on Shelter Island, the Kona Kai Club and Christian’s Hut restaurant and bar (later Bali Hai), embodied Tiki Modern-style architecture design. Comprehensive planning and design review later ensured that Shelter Island development would continue this architectural style, which combined the traditional architectural forms of Pacific Islander cultures and Googie-Futurist architecture’s boldly geometric roof shapes and expansive plate glass windows and doors. Examples of this style at Shelter Island include multiple commercial buildings along the causeway portion of Shelter Island Drive, Humphrey’s Half Moon Inn and Suites (1959), Humphrey’s by the Bay Restaurant (1964, originally the Tahitian), a portion of the Best Western Island Palms Hotel/Shelter Island Marina (1960, originally the Shelter Island Inn), and the Yokohama Friendship Bell pavilion. In 1958, the bell was presented by San Diego’s Japanese “sister city,” Yokohama, and is housed in a pavilion at the island’s southwest traffic circle. The site was dedicated in December 1960. (City of San Diego 2007:64–65, *San Diego Union* 1953:46, District 1974:7, SOHO 2008:3–13, Reupsch n.d.:4, Save Our Heritage Organization [SOHO] 2008:2-3.)

Portions of the PD1 were improved between the late 1970s and the 1990s. In 1977, the District reconstructed the public boat ramp and installed a second public pier. In 1980, the eroding La Playa Beach west of the southwest end of Shelter Island was protected with a 370-foot stone groin and sand replenishment. By 1982 Shelter Island’s southerly Yacht Harbor and the northerly Commercial Basin had over 2,700 boat slips. In 1983 the District invested \$2 million in improvements to Shelter Island that included new landscaping and pedestrian circulation paths. In recognition of San Diego’s role as host to the America’s Cup sailing competition in 1992 and 1995, the Commercial Basin was renamed America’s Cup Harbor in April 1994. In early 1995, the District completed \$2.5 million in improvements to the America’s Cup Harbor promenade. (Frost 2002:7; District 1982:13–14, 24–25.)

Planning District 2: Harbor Island

The Harbor Island Planning District (PD2) includes the San Diego International Airport (formerly Lindbergh Field), a portion of Pacific Highway at the east edge of the airport, and Tidelands south of the airport, lands along Harbor Drive, Harbor Island itself, and the island's West and East Marinas. As noted above, Lindbergh Field was created in 1928 and improved incrementally over time. The San Diego County Regional Airport Authority (SDCRAA) has assumed land use authority over SDIA, and accordingly, is not discussed in detail below. As explained in the Project Description, the District holds, in trust, the land under the SDIA, but does not regulate the activities of the SDIA Authority, including land use. Therefore, this section focuses mainly on Harbor Island, waterfront lands south of Harbor Drive, and the Pacific Coast Highway corridor within the planning district.

Extensive development associated with the aviation industry had occurred within what is now proposed as the Harbor Island Planning District south and north of the Lindbergh Field runway prior to the creation of Harbor Island. Consolidated Aircraft Plant No. 1 began operations along Pacific Highway north of the runway in 1935. Operated by Consolidated Aircraft and Consolidated Vultee Aircraft (Convair), and eventually acquired by the General Dynamics Corporation, the plant produced thousands of Consolidated B-24 Liberator bomber's and Catalina flying boats (Van Wormer 1996). In 1939, T. Claude Ryan established the Ryan Aeronautical Company south of the runway. Expanded over time, this aircraft manufacturing complex was operated by the Ryan Aeronautical Company until 1969, when Teledyne Inc. acquired the complex (Van Wormer 2006). Most of the buildings that formed these aviation industry complexes have been demolished. Between 1942 and 1944, the City of San Diego constructed Harbor Drive between Grape Street and Point Loma (Reupsch 1970a:5).

One notable building originally associated with the aviation industry, survives east of what is now proposed as the Harbor Island Drive and south Harbor Drive. Serving as the Harbor Police Headquarters today, the building was originally developed by the Institute of Aeronautical Sciences (IAS) in 1949, led at the time by Reuben Fleet, the head of Consolidated Aircraft and then president of the IAS. The Moderne style building was designed by renowned San Diego architect William Templeton Johnson (Jordan and McGinnis 2002:12). In 1965, the District vacated its offices at Ash Street and Harbor Drive and moved into the former Convair/General Dynamics headquarters at 3165 Pacific Highway, which it continues to occupy today (Reupsch 1970a:9).

The District began creation of Harbor Island in 1961, through the placement of fill material produced as a result of dredging of the main harbor channel, to accommodate aircraft carriers. In anticipation of marina development and commercial leases on Harbor Island, the District initiated development of Spanish Landing Park in 1967, along the southern edge of Harbor Drive, west of today's Harbor Island Drive. The park was named in honor of the Portola-Serra expedition of 1769, which landed near the park site and marked both the beginning of Spanish colonization in California and the first European occupation of what would become San Diego. The original Spanish Landing site is commemorated within the park by a California Historical Landmark plaque. Developed in phases, the park encompassed 16.6 acres by 1976 (District 1974:6, Frost 2002:5).

By 1970, the District had leased most of the Island. The Ramada Inn of America (today's Sheraton San Diego) completed the first hotel on the island in 1969, and the Travelodge Harbor Island (today's Hilton) opened for business the following year. By 1974, Harbor Island had received a total of \$30 million worth of capital improvements, including multiple hotels, restaurants, and marina

facilities providing over 1,000 boat slips. Opened in 1977, Cabrillo Isle Marina added 250 more slips (Frost 2002:3–5, District 1974:6).

Development of Harbor Island continued through the 1980s. Work began on a \$20 million addition to the Sheraton in 1980 that added 500 rooms. By 1982, Harbor Island had 1,600 boat slips. Completion of the Sunroad Marina at the Harbor Island's east basin added 540 more boat slips in 1987 (Frost 2002:6, 8; District 1982:18-19).

Planning District 3: Embarcadero

The proposed Embarcadero Planning District (PD3) has a longer history of development and redevelopment than any other Tideland planning district. It consists of leased properties and public facilities from Pacific Highway west to the Bay between Laurel Street and G Street, and leased properties and public facilities south and southwest of Harbor Drive from G Street to the TAMT. Containing the San Diego Convention Center, the County Administration Center (formerly the San Diego Civic Center), numerous hotels and commercial complexes, and multiple piers, parks, and marinas, the Embarcadero Planning District forms Downtown San Diego's tourist and recreation-oriented waterfront.

During the early twentieth century, the far northern portion of the planning district consisted of wharfs and waterfront industrial facilities that would later become home to one of San Diego's aircraft companies. By 1927, a former tuna cannery was converted by Ryan Airlines to an aircraft manufacturing facility that produced the airplane known as the *Spirit of Saint Louis*, flown by Charles Lindbergh to complete the first non-stop transatlantic flight. Remodeled during subsequent decades, the building became part of the Solar Aircraft Corporation (or formerly Prudden Aircraft) complex. Barely surviving the worst years of the Great Depression during the early 1930s, Solar Aircraft had 700 employees by 1940 and expanded during World War II. The company's production of heat-resistant metals for aviation ensured its continued growth after the war, and by the early 1960s had 1,800 employees (Pourade 1967:127, 167, 237; Pourade 1977:84, 196; URS Corporation 2009).

Throughout the first half of the twentieth century, the harbor front south and southeast of the Naval Supply Center consisted mainly of industrial operations, piers, and recreational facilities. During the 1920s and 1930s, the harbor front in this area was expanded through fill consisting of both dredge spoil and refuse deposited by municipal trash disposal facilities (City of San Diego 2013:21–23). The southeastern portion of the planning district was also home to the San Diego Rowing Club (SDRC), which constructed a clubhouse along the Pacific Steamship Company wharf in 1900. During the 1970s, fill activity extended harbor front land to and beyond the clubhouse. Operated as a Joe's Crab Shack restaurant today, the SDRC clubhouse is listed on the National Register of Historic Places (NRHP) and the City of San Diego's Register of Historical Resources (City of San Diego 2013:21–23; Seymour 2013).

The Federal government funded substantial development within the Embarcadero Planning District during the 1930s as part of the New Deal, the set of programs created by the presidential administration of Franklin Delano Roosevelt to address the Great Depression. As mentioned above, the most significant built-environment resource created along the waterfront with New Deal assistance was the WPA-funded San Diego Civic Center (now the County Administration Center), completed in 1938. The WPA-funded a \$500,000 project to create Battery Park at the foot of Pacific Highway that involved reclamation of 25 acres of waterfront land and construction of several piers in 1938. Part of this area would later become Navy Field (no longer present). Also constructed on

this reclaimed land in 1938–1939 with New Deal funding was the San Diego Police Headquarters, Jail and Courts complex, designed by master architects Charles and Edward Quayle and Albert O. Treganza. This Spanish Colonial Revival-style complex is listed on the NRHP. Pacific Highway was also improved at this time from Battery Park to the north beyond Lindbergh Field (Harbor Department 1948:75; May 1998; Reupsch 1970a:4).

Development continued in the same area of PD3 during the 1940s. Originally constructed in 1928, the Navy Pier at the Supply Center was lengthened to 1,000 feet. Today the *USS Midway*, the historic World War II aircraft carrier that houses the USS Midway Museum, is located on the south side of the pier. In 1944, the Harbor Department began construction of the G Street Mole Pier. Created with 64,000 cubic yards of material dredged by the Navy and 26,000 cubic yards of fill trucked to the site, this new mole pier was developed for the tuna and sportfishing industries. Three other tuna fleet piers were constructed at Grape Street in 1952. The G Street Mole Pier received additional improvements beginning in the 1970s. In 1978, the District constructed a \$1 million concrete pier extending southeast from the original G Street Mole structure. A 400-foot-long Fish Harbor Pier was constructed just north of today's Seaport Village in 1981. These two piers essentially converted the G Street Mole area into a sheltered marina. Additional piers were subsequently constructed within the marina. (District 1982:23, 30; Reupsch 1970a:5.)

Beginning in the 1960s, efforts to boost San Diego's tourism economy led to new development and long-term planning that began to reshape the waterfront within the proposed Embarcadero Planning District. In 1964 and 1967, respectively, a warehouse and the former Harbor Department offices were demolished to make way for construction of hotels. As noted above, the redeveloped Broadway Pier opened as a cruise ship terminal in 1972. That year the District revised the master plan for Embarcadero development. In June of the following year, the District opened the \$1.6 million Harbor Seafood Mart complex west of the Police Headquarters complex and south of the G Street Mole. In 1978–1979, the Harbor Drive corridor between the Seafood Mart and Broadway was beautified and improved with new streetlight fixtures, landscaping, and a bike path. (District 1974:7; District 1982:22, 26; Reupsch 1970a:9–10.)

The former industrial waterfront from the G Street Mole and the Harbor Seafood Mart southeast to the northwest end of the TAMT was also transformed during the latter 1970s. Begun in 1978, construction of the 11-acre Seaport Village complex south of the Harbor Seafood Mart was completed in 1980. The complex opened in June of that year accommodating 70 retail shops. "Recreating the California waterfront atmosphere" of the late nineteenth century, explains a history of the Port of San Diego, "the \$18 million dining, shopping and recreational theme park blends architectural styles of old Monterey, Victorian San Francisco and traditional Mexico" (District 1982:26–27).

Major redevelopment projects to the southeast of Seaport Village were also completed in 1980. Beginning in 1976, dredging of the main harbor channel provided fill material for creation of the North and South Embarcadero Marina Park peninsulas. The northern and southern peninsulas were completed in 1979 and 1980, respectively. The \$2.5 million southern park incorporated the NRHP-listed San Diego Rowing Club building and featured a fishing pier, basketball courts, pedestrian and bicycle paths, and an exercise course. Landscaping for the two parks included over 400 trees (Frost 2002:5–6, District 1982:27–28).

During the 1980s, the District also initiated redevelopment of the Navy Field site immediately northeast of the northern marine basin formed by creation of the Embarcadero North and South

Park peninsulas. The District acquired Navy Field in 1981 and arranged for Torrey Enterprises to construct a hotel there and develop marina facilities in the Embarcadero Marina North basin. Harbor Drive was rerouted to provide for development of a waterfront promenade west of the hotel site. In March 1984, the first curvilinear glass-skin tower of the Intercontinental Hotel complex opened at the former Navy Field site. Construction began on a second 700-room Hotel Intercontinental tower in July 1986. In 1987 the completed hotel complex became the Marriot Hotel and Marina, today's San Diego Marriot Marquis and Marina. The San Diego Police Headquarters, Jail and Courts complex closed that year and the Police Department moved into a new headquarters at Broadway and 14th Avenue. In 2008 Terramar Retail Centers signed a long-term lease for the old Police Headquarters property, which was listed in the NRHP in 1998, and rehabilitated it in accordance with the Secretary of the Interior Standards for the Treatment of Historic Properties. In 2013 the property opened for business as The Headquarters, a multi-tenant retail and dining center. (Frost 2002:7-9, District 1982:28, The Headquarters 2020.)

Less intensive development occurred in the northern portion of the planning district during the latter 1980s. In 1985, the District completed a \$6 million renovation of the crescent area at the waterfront near the Solar Turbines complex, from the U.S. Coast Guard Station to the Grape Street tuna fishing piers. The District also converted the B Street Pier into a second cruise ship terminal, dedicated in January 1986. In 1989, the Fish Market restaurant opened at the G Street Mole. (Frost 2002:8, 10.)

Established in 1948 and located at waterfront docks across Harbor Drive from the southern end of the County Administration Center, the San Diego Maritime Museum was, by the 1970s, home to two historic vessels currently listed on the NRHP: the *Star of India* and the ferryboat *Berkeley*. Originally named the *Euterpe*, the *Star of India* was constructed in 1863 and first sailed by Liverpool's Wakefield, Nash & Company. When listed on the NRHP in 1966, the *Star of India* held the title of the oldest operable iron-hulled sailing ship in the world. It was designated a California Historical Landmark in 1999. Constructed in 1898 by the Union Iron Works in San Francisco, the *Berkeley* operated as a ferryboat until 1958. Considered the best-preserved example of a double-ended propeller driven ferry in the United States, the *Berkeley* is listed on the NRHP and is a California Historical Landmark. Additionally, both the *Star of India* and the *Berkeley* have been designated National Historic Landmarks. (Delgado 1990:9, 13; Maritime Museum of San Diego 2017; Snell 1966:7.1.)

One of the most important San Diego developments of the latter twentieth century, the waterfront San Diego Convention Center was initiated in 1984 when the Board entered into an architectural contract with a team led by Arthur Erickson. The first phase of construction began in 1985. In 1987, Tutor Saliba and Perini Corporation won the contract for the second phase of construction. The \$165 million Convention Center opened in November 1989 and hosted its first event, the San Diego International Boat Show, beginning at the end of that month. In 1992, the 875-room Hyatt Regency (today's Manchester Grand Hyatt Hotel), opened immediately northeast of Seaport Village. In June 1998, a ground-breaking ceremony inaugurated construction of the Convention Center expansion. Completed in 2001, the expansion project nearly doubled the size of the facility. In 2002, the District authorized development of the Hilton San Diego Convention Center southeast of the Embarcadero Marina Park South and northwest of the TAMT. (Frost 2002:7-8, 10-11, 14-15.)

Planning District 4: Working Waterfront

The Working Waterfront Planning District (PD4) encompasses the TAMT facility, Cesar Chavez Park, and harbor front industrial facilities and properties from Cesar Chavez Parkway southeast to the area of 28th Street and Chollas Creek Channel.

The construction of the TAMT transformed a Tideland area that was home to multiple industrial operations during the first-half of the twentieth century. These included a San Diego incinerator and refuse disposal facility, a General Petroleum Corporation of California facility, the Benson Lumber complex, and various industrial enterprises related to fish processing, including the West Coast Crab & Lobster Company, the Southern Reduction Company, and the American Processing Company. Construction of the marine terminal began in 1956 with fill activity to create the terminal's mole wharf. The TAMT opened in 1958 with two transit sheds. By 1964, additional construction had equipped the TAMT with approximately 1,000,000 square feet of transit shed and warehouse storage space, a state-of-the-art bulk loader system, a molasses storage facility, and a fuel oil facility. During the 1970s, a silo complex and a tuna cannery (the latter is no longer present) were also developed at the TAMT (ICF 2016:25–36).

The waterfront southeast of the TAMT, between Cesar Chavez Parkway and Chollas Creek Channel, has a long history of industrial development. Prior to World War II, a concentration of industrial fish processing wharfs and factories took shape along the Bay frontage in the vicinity of today's San Diego-Coronado Bay Bridge. These included the Lower California Fisheries Company, International Packing Corporation, Sun Harbor Packaging Corporation, and Normandy Seafood Company. In 1941, the Kelco kelp production company, which had previously established operations near Crosby Street, developed a waterfront facility northwest of Sampson Street. In 1915 the San Diego Marine Construction Company developed a wharf and facilities for repairing and constructing marine vessels at the foot of Sampson Street. A wharf at the foot of 28th Street was home to the San Diego Yacht Club until it relocated to Point Loma. (Sanborn Map Company 1940a, 1940b; Tetra Tech Inc. 2016:8–9.)

Leading up to and during World War II, U.S. Naval and fishing industry demand for ship construction and repair services stimulated development of new industrial marine operations, as well as expansion of established operations in the area from Sampson Street southwest to 28th Street. The San Diego Marine Construction Company improved and expanded its facilities at Sampson Street. Wharf construction and fill provided for the dramatic expansion of industrial operations between Schley Street and 28th Street to form the harbor's main shipyards, which included marine vessel construction and repair facilities developed by the Lynch Shipbuilding Company, National Iron Works (later National Steel and Shipbuilding Company), and the Martinolich Shipbuilding Company. (Harbor Department 1948:26–28; Sanborn Map Company 1946a, 1946b.)

Shipbuilding facilities continued to grow and occupy more waterfront property after World War II, and the National Steel & Shipbuilding Company (NASSCO) became the largest. NASSCO was formed in 1949 when the National Iron Works acquired the Lynch Shipbuilding Company. The adjacent San Diego Marine Construction Company also grew and was acquired by Southwest Marine Construction Company in 1982. Southwest Marine operates today as BAE Systems San Diego Ship Repair, and NASSCO is owned by General Dynamics. (Colton 2007; Frost 2002:7; Tetra Tech Inc. 2016:8–10.)

The San Diego-Coronado Bay Bridge was constructed in 1969. Renowned San Diego-area architect Robert Mosher designed the bridge, which has been determined eligible for the NRHP. The San

Diego-Coronado Bay Bridge is the world's lengthiest continuous box girder bridge. (San Diego Cultural Heritage Alliance 2017.)

By the time of the bridge's construction industrial development had completely dominated the bayfront, blocking Barrio Logan residents from access to the Bay. A long effort by neighborhood activists to secure bayfront recreational space for the community succeeded in the 1980s. The District provided 3 acres at the foot of Crosby Street for development of a park. Groundbreaking took place in 1987. Originally named Crosby Street Park, the facility was officially dedicated in 1992 and later expanded to 4 acres and equipped with a pier (Gorman 1992:B-1, B-9; Frost 2002:9). Eventually renamed for Cesar Chavez, the park today features a wall incorporating 11 tile panels displaying images of Barrio Logan history.

Planning District 7: South Bay

The South Bay Planning District (PD7) includes both water and land areas at the far south end of San Diego Bay.¹ The area surrounding the southern extension of PD7, and overlapping slightly with the southern tip of PD7, historically contained a portion of an expansive South Bay landscape of earthen embankments and salt ponds used to produce salt since the latter nineteenth century. A historically important San Diego-area industry, solar salt production dates to the 1870s, when the La Punta Salt Works first made use of South Bay salt ponds. Founded in 1902 by Graham Babcock, the Western Salt Company established operations south of the La Punta Salt Works. By 1918, the company was responsible for 5 percent of California's total salt production, and by 1932 it produced 10 percent of California's salt. The Western Salt Company Salt Works eventually encompassed 1,300 acres, including its processing plant south of Palomar Street in western Chula Vista. (Gustafson et al. 2001:1-2, 6-7.)

In 1999, the California State Lands Commission authorized the District's acquisition of 1,400 acres from the Western Salt Company. The District transferred this land to the U.S. Fish and Wildlife Service for restoration as a wetland preserve, the South Bay Unit of the San Diego National Wildlife Refuge-Complex, dedicated in June 1999. As part of this project, the Western Salt Company Salt Works were determined eligible for listing on the NRHP as a historic landscape. A Memorandum of Agreement stipulated mitigation for the adverse effect to be caused by the U.S. Fish and Wildlife Service's habitat restoration, which required altering the appearance and function of the Western Salt Company Ponds 10, 10A, and 11. The mitigation included preparation of Historic American Landscapes Survey (HALS) documentation and public interpretation of San Diego's solar salt industry. (Frost 2002:13, Gustafson et al. 2001:1-2.)

Planning District 8: Imperial Beach Oceanfront

The Imperial Beach Oceanfront Planning District (PD8) consists of two parking lots immediately east of Seacoast Drive; paved beach access streets and parking west of Seacoast Drive, Dunes Park, Imperial Beach Pier and Pier Plaza; and the beach from Carnation Avenue south to just beyond the southern terminus of Seacoast Drive.

The current Imperial Beach Pier was constructed in the early 1960s to replace an earlier pier destroyed by heavy surf during storms in 1949 and 1953. Financed by a local bond issue and funds from the California Wildlife Conservation Board, a new 1,200-foot pier with a "T"-shaped end was

¹ Pond 20 is not within the proposed PMPU boundaries and is evaluated under a separate EIR (District 2020).

opened in November 1962. Winter storms in 1980, 1983, and 1986 brought severe damage to the pier. The current pier is the product of reconstruction completed in 1989. (South Bay Compass 2016.)

In June 1990, the State transferred 403 acres of oceanfront property in Imperial Beach to the District. On land just north of today's Pier South Resort, the District developed Dunes Park, which was officially opened in April 1995. The following year the District invested \$12 million in improvements to its Tideland property in Imperial Beach. Also that year, as part of the District's Public Arts Program, the "Ocean Riders" sculpture by the artist Wyland, was publicly unveiled at Dunes Park. In 1999, the Dempsey Holder Safety Center opened immediately south of Pier Plaza. In June 2000, the Tin Fish restaurant opened at the end of the Imperial Beach Pier. (Frost 2002:10, 12, 14.)

Planning District 9: Silver Strand

Situated in the southwest corner of San Diego Bay, the Silver Strand Planning District (PD9) consists of Bay waters and shoreline extending from Crown Cove to the southern end of the Coronado Cays. It includes both the Crown and Grand Caribe Islands and the causeways connecting those reclaimed land masses to the Coronado Cays.

In 1930, the State Parks Commission won voter approval of a bond issue that funded land acquisition and development of Silver Strand State Park. The New Deal-era Civilian Conservation Corps completed the first 8 acres of the Silver Strand State Park in 1936. The State Division of Highways began widening Highway 75 (Silver Strand Boulevard) into a divided four-lane highway, in 1955. (Schoenherr 2015.)

The Coronado Cays and the Crown and Grand Caribe Islands were developed beginning in 1968 by the Coronado Cays Corporation and Signal Properties. The development would occupy 228 acres of land on the east side of Highway 75 and 140 acres of adjacent Tidelands transformed by dredging and filling into a residential subdivision with marina channels and boat slips. Grand Caribe Island was developed during the 1970s. Crown Island remained undeveloped through the late 1980s. In 1991, however, the completed 440-room Loews Coronado Bay Resort opened on Crown Island. (Schoenherr 2015.)

Planning District 10: Coronado Bayfront

The Coronado Bayfront Planning District (PD10) consists of harbor-front land and near-shore waters stretching east from Alameda Boulevard and following the shoreline south to Glorietta Bay. This planning district is divided by the San Diego-Coronado Bay Bridge. South of the bridge, PD10 encompasses the Coronado Municipal Golf Course and the Glorietta Bay slips. North of the bridge, the planning district contains Coronado Tidelands Park, the Coronado Island Marriot Resort, the Coronado Ferry Landings and associated Marketplace complex, and the far northern portion of Centennial Park.

While occupying the Hotel Del Coronado Boathouse building, located outside the planning district, the Coronado Yacht Club built boat slips and arranged for Glorietta Bay to be dredged so that more of it could be used, and so that the club could host races and other events. The Yacht Club first leased its current property to the north of the Boathouse in 1946. In 1947 the Yacht Club acquired a government surplus building and relocated it to the leased property. The building has since served

as the organization's clubhouse. Today the club has over 900 members and slip facilities that accommodate more than 270 yachts. (Coronado Yacht Club 2017.)

Occupying the shoreline from the northwest area of Glorietta Bay to the area south of the San Diego-Coronado Bay Bridge, the Coronado Golf Course dates to the 1950s. Closed during World War II, the Coronado Country Club was redeveloped into a residential tract, leaving the resort city without a golf course. Dredging of Glorietta Bay provided fill material to reclaim 137 acres of land for the golf course. Golf course architect Jack Daray suspended his retirement to design the \$100,000 facility. The new course opened on December 19, 1957, and soon hosted the Hotel del Coronado Pro-Am Tournament. Expanded over the decades, the golf course's clubhouse was replaced with a new building in the late 1990s. (Coronado Historical Association 2017; Welcome to Coronado 2015.)

Existing development within PD10 north and northwest of the San Diego-Coronado Bay Bridge dates to the 1980s and later. Marking the 100th anniversary of Coronado's founding, Centennial Park was opened by the City of Coronado in 1986, at the site of the original Coronado Ferryboat Terminal, which operated until the completion of the bridge in 1969. In 1987, the District opened a new \$600,000 ferryboat landing and fishing pier near the foot of B Avenue. This facility was developed in conjunction with the \$7 million Ferry Landing Marketplace, which opened south of the landing facility in 1987. During the following year, the Le Meridien Hotel (today's Coronado Island Marriott Resort and Spa) opened east of the ferry landing. That year the District also completed the 22.5-acre Coronado Tidelands Park, the District's largest Tideland park, to the south of the hotel complex. (City of Coronado n.d., Frost 2002:9.)

4.4.2.4 Existing Cultural Resources

A record search was conducted by the South Coastal Information Center (SCIC) on April 24, 2017, to identify cultural resources within the proposed PMPU area and its quarter-mile buffer. The SCIC maintains the California Historical Resource Information System (CHRIS) database for San Diego County and keeps a record of all reported cultural resource studies and findings within the county. The record search revealed that 275 previously recorded cultural resources are located within a 0.25-mile buffer but outside of the proposed PMPU area. A total of 43 previously recorded cultural resources have been identified within the proposed PMPU area, of which 16 are archaeological resources and 27 are historical (or built environment) resources.

In addition, research was conducted to identify properties not documented in the record search results that are within the PMPU area and listed in the NRHP, the CRHR, or local historical resources registers. Cultural resources subject to significant impacts under CEQA are: (i) resources listed on the NRHP, the CRHR, or local register of historical resources registers; (ii) resources determined eligible for listing in the NRHP with concurrence by the State Historic Preservation Officer (SHPO); (iii) resources determined eligible for CRHR listing by a CEQA lead agency; and (iv) resources determined eligible for listing in a local register of historical resources by the local government that maintains the register. For discussion of the significance criteria and historical integrity considerations applied to determine NRHP and CRHR eligibility, see Section 4.4.3, *Laws, Regulations, Plans, and Policies*.

Sections below provide further detail regarding previously identified and evaluated cultural resources within PD1, PD2, PD3, PD4, PD7, PD8, PD9, and PD10 and the potential that additional, yet-to-be identified or evaluated cultural resources could be present. The identified archaeological resources are listed below under *Archaeological Resources*, which also provides a prehistoric

archaeological sensitivity analysis outlining the potential for encountering intact prehistoric archaeological resources in each of these planning districts. That is followed by *Historical Resources*, which lists the built environment resources within PD1, PD2, PD3, PD4, PD7, PD8, PD9, and PD10 that have been evaluated for historical and architectural significance. That discussion also characterizes the potential for encountering built environment resources within each of these planning districts that could require evaluation at the project level, as the proposed PMPU is implemented through the year 2050.

Archaeological Resources

A record search conducted by the SCIC on April 24, 2017, identified 16 archaeological resources located within the proposed PMPU area. Out of the 16 resources, 6 were prehistoric, 9 were historic, and 1 contained both historic and prehistoric elements. The prehistoric sites consisted of middens, artifact scatter, or shell scatters, while the historic sites were mostly refuse deposits. Resources identified in each planning district are discussed below. The District cannot legally provide precise location information on these resources per State CEQA Guidelines Section 15120(d).

Known Archaeological Resources

The following describes the known archaeological resources present within the proposed PMPU area based on the results of the SCIC record search. It should be noted that it is not feasible to survey every parcel in the District in a programmatic analysis. The District contains hundreds of acres of water and land, and access to subsurface testing is not always available due to overlying structures and paved surfaces. Furthermore, project-specific/site-specific information is not currently known. Cultural resources assessments would be conducted prior to the approval of each future project.

Planning District 1: Shelter Island

The record search revealed that no archaeological resources have been recorded within PD1.

Planning District 2: Harbor Island

As shown in Table 4.4-2, a record search revealed that one archaeological resource (a prehistoric midden) has been recorded within PD2. Only a small portion of the site intersects with PD2, with most of the site outside of the PD2 boundary. In 2013, the archaeological resource was determined not eligible for listing in the NRHP with SHPO concurrence and also determined not eligible for listing in the CRHR by the San Diego Association of Governments (SANDAG).

Table 4.4-2. Previously Identified Archaeological Resources Within Planning District 2: Harbor Island

Resource ID	Time Period	Description	Eligibility/ Listing	Status Code
P-37-000054	Prehistoric	Midden, possibly destroyed.	Determined ineligible for NRHP/CRHR listing	6Y

Notes:

California Historical Resource Status Code 6Y: Determined ineligible for NRHP by consensus through Section 106 process—Not evaluated for CRHR or Local listing.

Planning District 3: Embarcadero

As shown in Table 4.4-3, the record search revealed that seven historic archaeological resources have been recorded within PD3. Four consist of historic refuse deposits or city dumps, and three consist of isolated historic artifacts (two boats and one bottle). All resources were identified during construction monitoring. Of particular note is Tidelands City Dump, a large historic-era trash dump located in former Tidelands with materials dating from the 1890s to 1930s. The site has never been formally evaluated for inclusion in the NRHP or CRHR; however, the site has been recommended as both significant and not significant by different archaeologists.

Table 4.4-3. Previously Identified Archaeological Resources Within Planning District 3: Embarcadero

Resource ID	Time Period	Description	Eligibility/ Listing	Status Code
P-37-017104/ CA-SDI-15118	Historic	Tidelands City Dump	Unevaluated	7
P-37-028564/ CA-SDI-18377	Historic	Household and building refuse, possibly related to Tidelands City Dump. Located under 4 feet of fill.	Unevaluated	7
P-37-028565/ CA-SDI-18378	Historic	Household and building refuse, possibly related to Tidelands City Dump. Located under 6 feet of fill.	Unevaluated	7
P-37-028979/ CA-SDI-18584	Historic	Household refuse deposit located during construction. Artifacts were collected.	Unevaluated	7
P-37-033270	Historic	Wooden boat (dinghy) located during construction monitoring.	Ineligible for NRHP listing	6Z
P-37-033271	Historic	Isolated glass bottle located during construction monitoring.	Ineligible for NRHP listing	6Z
P-37-033896	Historic	Remains of boat found during construction monitoring.	Ineligible for NRHP listing	6Z

Notes:

California Historical Resource Status Code 6Z: Found ineligible for NRHP, CRHR, or Local designation through survey evaluation.

California Historical Resource Status Code 7 – Not evaluated for NRHP or CRHR.

Planning District 4: Working Waterfront

As shown in Table 4.4-4, the record search indicated that one archaeological resource (P-37-00055) was recorded within PD4. The site record contains generalized information about the site location and artifacts (midden and shell scatter). However, as discussed in the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component FEIR, there exists the potential for subsurface resources in the eastern section of the TAMT subdistrict of PD4 due to the presence of an extensive prehistoric resource (CA-SDI-5931) previously identified to the east of the subdistrict.

Table 4.4-4. Previously Identified Archaeological Resources Within Planning District 4: Working Waterfront

Resource ID	Time Period	Description	Eligibility/ Listing	Status Code
P-37-000055/ CA-SDI-55	Prehistoric	Midden and shell scatter.	Unevaluated	7
P-37-005931/ CA-SDI-5931	Prehistoric	Large artifact scatter including Native American burial.	Unevaluated	7

Notes:

California Historical Resource Status Code 7 – Not evaluated for NRHP or CRHR.

Planning District 7: South Bay

The record search revealed that no archaeological resources have been recorded within PD7.

Planning District 8: Imperial Beach Oceanfront

As shown in Table 4.4-5, the record search revealed that one archaeological resource was recorded within PD8. P-37-004641 consists of a prehistoric lithic and groundstone scatter recorded in 1972.

Table 4.4-5. Previously Identified Archaeological Resources Within Planning District 8: Imperial Beach Oceanfront

Resource ID	Time Period	Description	Eligibility/ Listing	Status Code
P-37-004641	Prehistoric	Artifact scatter with flakes and groundstone.	Unevaluated	7

Notes:

California Historical Resource Status Code 7 – Not evaluated for NRHP or CRHR.

Planning District 9: Silver Strand

As shown in Table 4.4-6, the record search indicated that two archaeological resources were recorded within PD9. One of the resources (P-37-019281) was recorded as a mix of historic and modern refuse found in fill, and the other (P-37-026498) consists of a historic and prehistoric artifact scatter.

Table 4.4-6. Previously Identified Archaeological Resources Within Planning District 9: Silver Strand

Resource ID	Time Period	Description	Eligibility/ Listing	Status Code
P-37-019281	Historic	Historic and modern refuse found in fill deposit and dating to the 1960s to 1970s.	Unevaluated	7
P-37-026498	Both	Prehistoric artifact scatter with lithics, shell, and hearth features as well as historic glass and faunal remains of unknown age.	Unevaluated	7

Notes:

California Historical Resource Status Code 7 – Not evaluated for NRHP or CRHR.

Planning District 10: Coronado Bayfront

As shown in Table 4.4-7, the record search indicated that two prehistoric resources (midden, and lithic and shell scatter) and one historic resource (trash dump, cement walkway and pier) are located within PD10.

Table 4.4-7. Previously Identified Archaeological Resources Within Planning District 10: Coronado Bayfront

Resource ID	Time Period	Description	Eligibility/ Listing	Status Code
P-37-000066	Prehistoric	Midden and shell scatter.	Unevaluated	7
P-37-009539/ CA-SDI-9539	Prehistoric	Lithic and shell scatter, possibly originated as fill material brought in during construction.	Unevaluated	7
P-37-028978/ CA-SDI-18583	Historic	Trash dump dating to between 1939 and 1948 and cement walkway and wood pier, all located beneath fill.	Unevaluated	7

Notes:

California Historical Resource Status Code 7 – Not evaluated for NRHP or CRHR.

Prehistoric Archaeological Sensitivity Model

Within the context of this PEIR, the term *archaeological sensitivity* is used to describe the potential for encountering intact prehistoric archaeological resources. Areas with high archaeological sensitivity would be considered to have increased potential for encountering intact prehistoric archaeological resources, whereas areas with low archaeological sensitivity would be considered to have decreased potential for encountering intact prehistoric archaeological resources.

This archaeological sensitivity analysis was developed using existing documentary sources and is intended to assist with characterizing the risk of encountering as-yet undocumented prehistoric archaeological resources. The purpose of performing an archaeological sensitivity analysis is to determine the risk of encountering as-yet undocumented archaeological resources to help guide decision-making relating to the need, and level of effort required, for future archaeological studies. Defining an area as having low archaeological sensitivity does not preclude it from containing intact archaeological resources but rather indicates that the likelihood of encountering such a resource is decreased relative to other areas.

As indicated above, this model only considers prehistoric archaeological sensitivity. Historical archaeological sensitivity is not limited to areas landward of the pre-development shoreline as historical archaeological sites could post-date anthropogenic filling in some instances, and is best considered via detailed historic map and documentary research. This research was already performed for the proposed PMPU and is summarized above under *History of the Planning Districts*.

Analytical Framework

This analysis uses landforms as the unit by which the current and past landscape is divided to reflect patterns of prehistoric accessibility and land use. Landforms are physical landscape features with discrete attributes such as shape, lithology, and stratigraphy. The age and environment in which a landform is created has a direct bearing on when it becomes accessible for human use, how

humans interact with it once it becomes accessible, and how the material remains of these activities are preserved. Landforms are useful analytical units for considering the relationship between landscape history and human activities because each type has a unique set of physical attributes (e.g., age, depositional environment, stability, accessibility, resources) and can be recognized and contrasted at the macroscopic scale. Based on a review of geologic and U.S. Coast and Geodetic Survey maps of the study area vicinity, it is anticipated that it has been primarily shaped by coastal and anthropogenic processes, likely resulting in the formation of three common landform types: anthropogenic, tidal flats, and uplands. Descriptions of these landform types, their attributes, and archaeological sensitivity are presented below.

Anthropogenic

Human-induced (i.e., anthropogenic) modifications to the landscape result in the creation of new landforms that are anthropogenic, rather than natural, in origin. The study area was extensively filled during the early to middle twentieth century, with the most extensive filling occurring at the current location of Lindbergh Field between 1938 and 1942 and on Coronado Island between 1944 and 1945 (United States Department of Commerce 1938, 1942, 1944, 1945). Fill depths may range from a few feet up to 20 feet in depth (Ninyo & Moore 2020). Filling is used to raise the elevation of the ground surface and to provide structurally suitable materials for construction. The process of filling can bury the pre-development ground surface, which—when cutting has not removed deposits that retain archaeological potential—can bury archaeological resources, particularly in coastal environments (e.g., Schneyder et al. 2010; Elder and Sparks 2011; Elder et al. 2015; Valentino 2015). Depending on the fill material's source of origin, it may contain accumulations of precontact, historical, and/or modern items that have been displaced from the location of their primary deposition. Such items would not be in primary depositional context and, therefore, would not represent intact archaeological deposits.

Tidal Flats

Within the context of this section of the PEIR, the term *tidal flats* is used to collectively refer to three landform types that have similar physical attributes, but differ in their position relative to the intertidal zone (i.e., the area that is above water during low tide and submerged during high tide). These landforms are salt marshes, intertidal flats, and subtidal flats. All three are relatively flat plains incised by sinuous or winding tidal channels. They form along coasts or in lagoons, estuaries, and embayments where the depositional effects of tidal action are the dominant landscape formation processes. Although all three types of low-energy intertidal landforms occur within or below the intertidal zone, they occur at different elevations within these zones. Salt marshes, for example, occur at the interface between the supratidal zone (i.e., the zone that extends above normal high tide, but is regularly splashed by waves and storm events) and the upper intertidal zone (i.e., the zone that is only submerged during the highest tides) in locations where soil, salinity, and nutrient content is ideal for the growth of salt-tolerant vegetation. Intertidal flats occur throughout the intertidal zone, while subtidal flats occur below the intertidal zone. Although all three are formed by the same processes, each can exhibit minor variations in sedimentary composition relative to each other. All three landforms are typically composed of finely laminated clays, silts, and fine sands; but salt marshes may contain a higher concentration of decomposed organics, and subtidal flats may contain a slightly higher concentration of coarser sediments (Reading and Collinson 1996).

Tidal flats have been forming within and in the vicinity of the study area during the period for which there is scientific consensus regarding the age of human occupation of North America (starting at the Pleistocene/Holocene transition—around 12,000 years ago) (Meltzer 2004; Erlandson et al. 2007); however, the conditions in which they form reduce their potential to contain archaeological deposits. For example, although salt marshes and intertidal flats are rich in floral and faunal resources, they are regularly inundated and cannot be used for habitation or for resource processing activities that require long periods of time, although salt marshes are typically inundated less frequently than intertidal flats. Because the ground surface associated with subtidal flats is permanently inundated, human activities would not have occurred directly on the surface. As a result of the limited ground surface accessibility for all three landforms, it is anticipated that any evidence of human use of the landscape would be limited to occasional isolated tools and intertidal resource capture facilities (i.e., nets and traps) associated with brief periods of resource collection.

Depending on the local topography prior to the sea level rise that occurred during the Holocene epoch, the formation of tidal flats may have buried landforms that were previously sub-aerially exposed earlier in the Holocene epoch. Therefore, although tidal flats may have limited potential to contain archaeological resources, it is possible that they may bury landforms with the potential to contain archaeological resources.

Uplands

Within the context of this section the PEIR, the term *uplands* is used to refer to any natural (i.e., non-anthropogenic) landforms located inland of the shoreline. Although uplands can be created via a wide range of processes, the uplands in the study area vicinity are composed of middle to late Pleistocene-aged uplifted paralic (interbedded marine and continental) deposits and Holocene-aged alluvial deposits (Kennedy and Tan 2008). Depending on local resource availability, uplands are suitable for a wide range of land use activities, including resource collection, resource processing, and habitation. Especially in the San Diego region, these activities tended to have occurred near fresh waters sources (e.g., Christenson 1990; Robbins-Wade 1990) as there was no infrastructure to transport water other than by manually carrying it during the prehistoric period. Depending on the age of the uplands, anthropogenic landscape alteration can further influence the potential for encountering archaeological resources on uplands. For example, grading on Pleistocene-aged landforms is likely to remove any surfaces that may contain archaeological resources, whereas archaeological resources impacts on Holocene-aged landforms would depend on the thickness of the landform.

Methods

To consider archaeological sensitivity, historic shoreline data of the study area was collected and compared to the current shoreline. This was accomplished by obtaining digitized and georeferenced historical U.S. Coast and Geodetic Survey maps (Alden 1857) to trace the pre-development shoreline and then compare it to the current shoreline within the study area. To account for scale-induced mapping error, a 10-meter buffer was added to the seaward side of the pre-development shoreline. This was done to account for the potential maximum seaward extent of the pre-development shoreline. For those areas located landward of the pre-development shoreline, ICF archaeologists reviewed historic and recent topographic maps available at NETR Online (www.historicaerials.com) to consider whether these areas were filled.

Based on the information presented in the analytical framework and the local conditions identified by the methods above, all the study units were divided into two categories of archaeological sensitivity.

- **High Archaeological Sensitivity.** Areas located landward of the pre-development shoreline with evidence of filling. Such areas would have been accessible for a wide range of prehistoric land use activities and either minimally developed or protected from extensive disturbance because of the presence of fill.
- **Low Archaeological Sensitivity.** Areas located seaward of the pre-development shoreline or are Pleistocene-aged or older landforms that have been graded or extensively developed (but not filled). Seaward areas would have only been intermittently available for a small range of prehistoric land use activities. Pleistocene-aged or older landforms that have been graded or developed are likely to have extensively disturbed or removed ground surface that would have been associated with the period for which there is general consensus regarding the timing of human use of North America.

Findings

Review of the historic shoreline data revealed that only 0.50 percent (13.30 acres) of the total study area, distributed across PD1, PD2, PD3, PD4, PD7, PD8, PD9, and PD10, is located landward of the pre-development shoreline. Of these, four planning districts (PD1, PD3, PD4, and PD7) contain 100 percent (13.30 acres) of the landward area. All of the landward area has either been filled or has remained minimally developed and is therefore considered to have high archaeological sensitivity. The entirety of four planning districts—PD2, PD8, PD9, and PD10—are located seaward of the pre-development shoreline. Estimates relating to the depth of fill in areas where fill was identified could not be generated with the data that was available at the time of the completion of this analysis. However, general geotechnical analysis indicates fill can range from a few feet up to 20 feet in depth (Ninyo & Moore 2020). Table 4.4-8 identifies all the planning district areas within the proposed PMPU and the proportion of each that fall landward of the pre-development shoreline. Detailed descriptions of the archaeological sensitivity of each planning district are provided below the table.

Table 4.4-8. Historic Shoreline Data for Landward and Seaward Acreage, and Total Acreage of Each Planning District Within the Study Area

Planning Districts	Landward Acres (%)	Seaward Acres (%)	Total Acreage
PD1: Shelter Island	0.33 (<.01%)	322.47 (>99.90%)	322.80
PD2: Harbor Island	0.0 (0%)	382.80 (100%)	382.80
PD3: Embarcadero	1.28 (<.01%)	455.70 (>99.90%)	456.98
PD4: Working Waterfront	10.29 (2.80%)	357.70 (97.20%)	367.99
PD7: South Bay	1.40 (0.66%)	210.50 (99.34%)	211.9
PD8: Imperial Beach Oceanfront	0.0 (0%)	404.17 (100.0%)	404.17
PD9: Silver Strand	0 (0%)	231.70 (100%)	231.70
PD10: Coronado Bayfront	0 (0%)	272.70 (100%)	272.70
Total	13.30 (0.50%)	2637.74 (99.50%)	2,651.04

Planning District 1: Shelter Island

Less than 1 percent (0.33 acres) of PD1 (approximately 323 acres) is located landward of the pre-development shoreline. No previously documented prehistoric archaeological sites are located within this planning district. The desktop-based archaeological sensitivity analysis of PD1 indicates that the entire planning district has low archaeological sensitivity.

Planning District 2: Harbor Island

None of PD2 (approximately 383 acres) is located landward of the pre-development shoreline. One prehistoric archaeological site was previously documented within this planning district (P-37-000054). This site, however, could not be relocated at its documented location and was determined not eligible for listing in the NRHP/CRHR and is not considered a unique archaeological resource. Given that nearly the entire planning district is located seaward of the pre-development shoreline and the site could not be relocated, it is plausible that the site location was either mis-plotted or that the site was mis-identified dredge spoils, which can occasionally contain concentrations of shell. Based on the factors discussed above, the entire planning district has low archaeological sensitivity.

Planning District 3: Embarcadero

Less than 1 percent (1.28 acres) of PD3 (approximately 457 acres) is located landward of the pre-development shoreline. No previously documented prehistoric archaeological sites are located within this planning district. The desktop-based archaeological sensitivity analysis of PD3 indicates that the entire planning district has low archaeological sensitivity.

Planning District 4: Working Waterfront

Just under 3 percent (10.29 acres) of PD4 (approximately 368 acres) is located landward of the pre-development shoreline. One previously documented prehistoric archaeological site (P-37-000055) is located within this planning district, landward of the pre-development shoreline in an area identified as having high sensitivity for prehistoric archaeological sites. Therefore, the landward portion of the planning district (less than 1 percent) has high sensitivity for prehistoric archaeological sites while the seaward portion is considered to have low sensitivity for prehistoric archaeological sites.

Planning District 7: South Bay

Less than 1 percent (1.4 acres) of PD7 (approximately 212 acres) is landward of the pre-development shoreline. No previously documented prehistoric archaeological sites are located within this planning district. The desktop-based archaeological sensitivity analysis of PD7 indicates that the entire planning district has low archaeological sensitivity.

Planning District 8: Imperial Beach Oceanfront

None of PD8 (approximately 404 acres) is landward of the pre-development shoreline. One prehistoric archaeological site (P-37-004641) was previously documented at the easternmost edge of this planning district and is at the edge of the pre-development shoreline. A small portion is shown extending seaward of the pre-development shoreline. Overall, the desktop-based archaeological sensitivity analysis of PD8 indicates that the entire planning district has low archaeological sensitivity because the majority of the planning district is located seaward of the pre-development shoreline.

Planning District 9: Silver Strand

None of PD9 (approximately 232 acres) is landward of the pre-development shoreline. Despite this, a very small portion of one archaeological site (P-37-026498) is documented as being within the planning district. Overall, the desktop-based archaeological sensitivity analysis of PD9 indicates that the entire planning district has low archaeological sensitivity because the majority of the planning district is located seaward of the pre-development shoreline.

Planning District 10: Coronado Bayfront

None of PD10 (approximately 273 acres) is landward of the pre-development shoreline. Despite this, two archaeological sites (P-37-000066 and P-37-009539) are documented as being within the planning district. One of the sites (P-37-009539) appears to consist of imported and redeposited artifacts in fill material and, therefore, does not appear to be an intact archaeological site. The other (P-37-000066) contains limited information, and it is plausible that the site location was either mis-plotted or that the site was mis-identified dredge spoils, which can occasionally contain concentrations of shell. Based on the factors discussed above, the entire planning district has low archaeological sensitivity.

Historical Resources

This section identifies known built environment resources (intact buildings, structures, objects, and landscapes) within the eight planning districts. As outlined in Section 15064.5 of the State CEQA Guidelines, built environment resources that qualify as historical resources under CEQA include: any resource listed in the CRHR or determined eligible for listing in the CRHR by the State Historical Resources Commission (15064.5 [a] [1]); resources listed in local registers of historical resources as defined by Section 5020.1(k) of the PRC (15064.5 (a) (2)); resources identified as significant in a historical resources survey meeting the requirements of Section 5024.1(g) of the PRC (15064.5 [a] [2]); any resource determined by a CEQA lead agency to qualify as a historical resource provided the determination is supported by substantial evidence in light of the whole record (15064.5 [a] [3]). Any property listed in the NRHP is automatically listed in the CRHR, and therefore qualifies as a historical resource under CEQA. Properties determined eligible for listing in the NRHP with concurrence by the SHPO are considered eligible for the CRHR, and therefore are considered to qualify as historical resources under CEQA. Federal, State, and local regulations involving historical resources are addressed in more detail below in Section 4.4.3, *Laws, Regulations, Plans, and Policies*.

A variety of sources were used to gather information on previously identified built environment resources within the eight planning districts that have been evaluated for historical significance as part of past actions not associated with the proposed PMPU. California Department of Parks and Recreation (DPR) forms for evaluated buildings, structures, and landscapes within the planning districts were compiled from the record search results. A qualified architectural historian performed desktop research to confirm the existence of built environment resources within the planning districts evaluated in DPR forms yielded by the record search, and to screen out DPR forms for buildings and structures that have been demolished. Record search results and desktop research were used to identify NRHP-listed properties and California Historical Landmarks within the planning districts. The local historical resource registers of the Cities of Coronado and San Diego were also consulted to identify locally designated historical resources within the planning districts. The City of Imperial Beach does not have a local register. Records search results and desktop research indicate that 28 previously identified built-environment resources within the proposed

PMPU area have been evaluated for historical and architectural significance to determine their eligibility for NRHP, CRHR, or local listing. Nine of these built environment resources qualify as historical resources under CEQA because they are listed in the NRHP and/or the CRHR, they have been determined eligible for listing in the NRHP with SHPO concurrence (and are therefore eligible for CRHR listing), or they have been listed in a local register of historical resources. Nineteen of these previously identified built-environment resources within the proposed PMPU area have been evaluated and found ineligible for NRHP and/or CRHR listing. The only previously identified built environment resources in the proposed PMPU area considered historical resources throughout the 2050 lifespan of the proposed PMPU are those that remain listed in the NRHP, the CRHR, and local registers of historical resources. Previously identified built-environment resources determined eligible for NRHP listing with SHPO concurrence are likely to continue to qualify as historical resources under CEQA but may require reevaluation at the project level to determine if alterations have caused adverse changes in their significance. Previously identified built-environment resources that have been evaluated and found to be ineligible for NRHP or CRHR listing would require reevaluation at the project level if 10 or more years have passed since the original evaluation.

The subsections below identify the previously identified built-environment resources in each planning district and specify whether they currently qualify as historical resources under CEQA. The subsections also briefly characterize each planning district's projected historical resource sensitivity through the year 2050 (the planning horizon of the proposed PMPU), which serves to highlight areas that may need additional survey work in the future when a development, along with any related structure modifications or removal, is proposed. Without any projects proposed for development at this time, it is beyond the scope of this program-level analysis to perform site-specific evaluations. Site-specific surveys are appropriate once there is a better understanding of the areas that would be affected and how they would be affected (i.e., more details about a development proposal are known). Critically, this changes over time and structures that were not sufficiently old enough to warrant consideration during the preparation of this analysis may be at the time a development is proposed.

Planning District 1: Shelter Island

As shown in Table 4.4-9, the record search coupled with additional research identified one built environment resource within this planning district that has been evaluated and found not to qualify for CRHR listing.

Table 4.4-9. Previously Identified Built Environment Resources Within Planning District 1: Shelter Island

Resource	Location	Year Built	Currently Qualifies as a Historical Resource Under CEQA (Yes/No)	Status Code
Atkin-Moore Anchorage Building (P-37-036172)	2353 Shelter Island Drive, San Diego	1960	No	6Z

Notes:

California Historical Resource Status Code 6Z: Found ineligible for NRHP, CRHR, or local designation through survey evaluation.

As noted above, Shelter Island was developed as a recreational and commercial built environment beginning in the 1950s. Into the 1960s, planning policy required that new buildings constructed at Shelter Island exhibit "South Seas" or Tiki-Modern design qualities. Most of the buildings within the

planning district that retain Tiki-Modern style design attributes have reached the 50-year age threshold, at which built environment resources are typically considered potential historical resources. Buildings that have reached the 50-year age threshold require evaluation when future, site-specific projects subject to CEQA compliance stand to alter such resources. The Shelter Island Planning District also contains buildings, structures, and designed landscape spaces constructed after the 1960s that will reach the 50-year age mark between now and 2050. Identification of any buildings proposed for modification or future projects located adjacent to structures or buildings must determine if the structure is over 50 years or would be over 50 years old by the time a future project's construction is initiated.

Planning District 2: Harbor Island

The record search and other research efforts identified four existing built environment resources within this planning district that have been evaluated, as shown in Table 4.4-10.

Table 4.4-10. Previously Identified Built Environment Resources Within Planning District 2: Harbor Island

Resource	Location	Year Built	Currently Qualifies as a Historical Resource Under CEQA (Yes/No)	Status Code
Institute of Aeronautical Sciences Headquarters (Harbor Police Headquarters)	3380 North Harbor Drive, San Diego	1949	No	3S
South Overpass (Consolidated Aircraft Plant No. 1)	Pacific Highway at Port of San Diego Headquarters	Circa 1941	No	6Z
1411-1415 W. Palm Street	1411-1415 West Palm Street	Circa 1949	No	6Z
Spanish Landing Site, California Historical Landmark No. 891	Spanish Landing Park, North Harbor Boulevard, San Diego	NA	Yes	1CL, 5S1

Notes:

California Historical Resource Status Code 1CL: Automatically listed in the CRHR—includes State Historical Landmarks 770 and above and Points of Historical Interest nominated after December 1997 and recommended for listing by the State Historical Resources Commission.

California Historical Resource Status Code 3S: Appears eligible for NRHP as an individual property through survey evaluation (no SHPO concurrence—therefore, the property's historical resource status under CEQA remains undetermined).

California Historical Resource Status Code 5S1: Individual property that is listed or designated locally (San Diego Historical Resources Register)

California Historical Resource Status Code 6Z: Found ineligible for NRHP, CRHR, or local designation through survey evaluation.

The Institute of Aeronautical Sciences Headquarters (today's Harbor Police Headquarters) just south of Harbor Drive and east of Harbor Island Drive was found eligible for NRHP listing as part of a CEQA-only project not subject to SHPO concurrence. This property is an example of a resource that could require re-evaluation during the lifespan of the proposed PMPU at the project level should a proposed project stand to alter the property. The Spanish Landing Site, California Historical Landmark No 891, qualifies as a historical resource by virtue of its listing in the CRHR.

The San Diego International Airport (formerly Lindbergh Field) is not within the proposed PMPU area because it is within the land use jurisdiction of the SDCRAA. The Harbor Island Planning District focuses on the Pacific Highway and Harbor Drive corridors, and Harbor Island itself. As noted above, Harbor Island was created in the 1960s and developed beginning in the late 1960s. The island's first hotel opened in 1969. Much of Harbor Island's built environment dates to the 1970s and 1980s. Buildings, structures, and designed landscapes within the planning district under 50 years of age at present that stand to reach that age mark between now and 2050 are concentrated within Harbor Island, though such resources are also present along Pacific Highway.

Planning District 3: Embarcadero

Forming the Downtown San Diego waterfront, the Embarcadero Planning District has more built environment resources that currently qualify as historical resources under CEQA than any of the other planning districts. Research identified five resources in PD3 that qualify as historical resources under CEQA by virtue of being listed on the NRHP. Three are buildings and complexes: the historic San Diego Civic Center (today's County Administration Center); the City of San Diego Police Headquarters, Jail, and Courts (today's Headquarters at Seaport); and the San Diego Rowing Club (today's Joe's Crab Shack). Although the historic San Diego Civic Center (County Administration Center) is located within PD3, the property is not part of the District's jurisdiction. Two ocean vessels at the San Diego Maritime Museum are also listed on the NRHP: the *Star of India* and the *Berkeley*. Located at the west side of the Police Headquarters, California Historical Landmark No. 57 marking La Punto de Los Muertos has a status code of 7L, indicating that it needs reevaluation to determine if is eligible for the CRHR. These eight resources are listed in Table 4.4-11.

Table 4.4-11. Previously Identified Built Environment Resources Within Planning District 3: Embarcadero

Resource	Location	Year Built	Currently Qualifies as a Historical Resource Under CEQA (Yes/No)	Status Code
Atchison, Topeka & Santa Fe Railway (Burlington Northern & Santa Fe, P-37-024739)	Crossing at West Market Street, San Diego	1882–1883	No	6Y
Building 11, Solar Turbines Incorporated (P-37-030946)	2200 Pacific Highway, San Diego	Circa 1910s	No	6Z
San Diego Civic Center (County Administration Center)	1600 Pacific Highway, San Diego	1936–1938	Yes	1S
<i>Star of India</i>	San Diego Maritime Museum, 1492 North Harbor Drive, San Diego	1863	Yes	1S
<i>Berkeley</i>	San Diego Maritime Museum, 1492 North Harbor Drive, San Diego	1898	Yes	1S
City of San Diego Police Headquarters, Jail, and	789 West Harbor Drive, San Diego	1938–1930	Yes	1S

Resource	Location	Year Built	Currently Qualifies as a Historical Resource Under CEQA (Yes/No)	Status Code
Courts (Headquarters at Seaport)				
La Punta de Los Muertos, California Historical Landmark No. 57	East Side of Pacific Highway South of North Harbor Drive	NA	No	7L
San Diego Rowing Club (Joe's Crab Shack)	525 East Harbor Drive, San Diego	1899	Yes	1S

Notes:

California Historical Resource Status Code 1S: Individual property listed in NRHP by the Keeper. Listed in CRHR.
California Historical Resource Status Code 6Y: Determined ineligible for NRHP by consensus through Section 106 process—Not evaluated for CRHR or local listing.

California Historical Resource Status Code 6Z: Found ineligible for NRHP, CRHR, or local designation through survey evaluation.

California Historical Resource Status Code 7L: State Historical Landmarks 1-769 and Points of Historical Interest designated prior to January 1998—Needs to be reevaluated using current standards.

In addition to resources constructed prior to 1970, the Embarcadero Planning District contains numerous buildings, structures, and designed landscapes constructed from the early 1970s through the 1990s that stand to reach the 50-year age mark by 2050. Indeed, much of the planning district's built environment dates to those decades. Concentrations of development dating to those decades occur at the B Street Pier and nearby tourist-oriented facilities south of the County Administration Center and north of the Naval Supply Center, and the majority of PD3 from the Tuna Harbor at G Street to the southeast. In the latter area, built environment elements dating to the early 1970s through the 1990s include wharfs, restaurants, Seaport Village, multiple major hotel facilities, marinas, the Embarcadero Marina Park North and South Peninsula landscapes, and the Convention Center.

Planning District 4: Working Waterfront

The record search and other research efforts identified twelve existing built environment resources within PD4 that have been evaluated, as shown in Table 4.4-12.

Table 4.4-12. Previously Identified Built Environment Resources Within Planning District 4: Working Waterfront

Resource	Location	Year Built	Currently Qualifies as a Historical Resource Under CEQA (Yes/No)	Status Code
Atchison, Topeka & Santa Fe Railway (Burlington Northern & Santa Fe)	Area East of Tenth Avenue Marine Terminal, San Diego	1882–1883	No	6Z
Tenth Avenue Marine Terminal (TAMT) Potential Historic District	623 Switzer Street, San Diego	1957–1964	No	6Z
Transit Shed 1, TAMT	623 Switzer Street, San Diego	1957–1958	No	6Z

Resource	Location	Year Built	Currently Qualifies as a Historical Resource Under CEQA (Yes/No)	Status Code
Transit Shed 2, TAMT	623 Switzer Street, San Diego	1957–1958	No	6Z
Bunker Fuel Complex, TAMT	623 Switzer Street, San Diego	1959	No	6Z
Molasses Tanks, TAMT	623 Switzer Street, San Diego	1963	No	6Z
Truck Scale Building, TAMT	623 Switzer Street, San Diego	1963	No	6Z
Bulk Loader, TAMT	623 Switzer Street, San Diego	1962	No	6Z
Warehouse B, TAMT	623 Switzer Street, San Diego	1962	No	6Z
Warehouse C, TAMT	623 Switzer Street, San Diego	1964	No	6Z
Railroad Lines, TAMT	623 Switzer Street, San Diego	1958–1964	No	6Z
Silo Complex, TAMT	623 Switzer Street, San Diego	1970	No	6Z
San Diego-Coronado Bay Bridge (Caltrans Bridge No. 57-0858; P-37-016282)	San Diego-Coronado Bay Bridge	1969	Yes	2S2

Notes:

California Historical Resource Status Code 2S2: Individual property determined eligible for NRHP by consensus through Section 106 process. Listed in the CRHR.

California Historical Resource Status Code 6Z: Found ineligible for NRHP, CRHR, or local designation through survey evaluation.

Of the 10 planning districts, the Working Waterfront Planning District is the most densely developed and the most thoroughly industrial in character. One resource within the planning district has been evaluated and found historically significant: the San Diego-Coronado Bay Bridge. The California Department of Transportation (Caltrans) has determined that the bridge is eligible for NRHP listing with SHPO concurrence. The District's TAMT complex occupies the majority of the planning district northwest of the San Diego-Coronado Bay Bridge. The TAMT built environment was evaluated in 2016 as part of the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component Project FEIR, which is incorporated into this PEIR by reference (District 2016). In 2016 the TAMT was determined ineligible for listing in the CRHR by the District and determined ineligible for listing in the NRHP by the United States Maritime Administration with SHPO concurrence. The planning district contains numerous built-environment resources of a predominantly industrial character 50 years old or older, as well as resources that will reach the 50-year age threshold for as potential historical resources over the next 30 years.

Planning District 7: South Bay

As shown in Table 4.4-13, the record search coupled with additional research identified one built environment resource within this planning district that has been evaluated.

Table 4.4-13. Previously Identified Built Environment Resources Within Planning District 7: South Bay

Resource	Location	Year Built	Currently Qualifies as a Historical Resource Under CEQA (Yes/No)	Status Code
Western Salt Company Salt Works Landscape District	Southern end of San Diego Bay	1916–1949	Yes	2S2

Notes:

California Historical Resource Status Code 2S2: Individual property determined eligible for NRHP by a consensus through Section 106 process. Listed in CRHR.

A small portion of a historic landscape district that has been determined eligible for listing in the NRHP is located within this planning district: the Western Salt Company Salt Works. The landscape district consists of approximately 1,300 acres of salt ponds and other facilities. As noted above, mitigation in the form of HALS documentation and public interpretation was prepared in the early 2000s for the adverse effect on the resource caused by habitat restoration efforts that required alteration of the appearance and function of the Western Salt Company Ponds 10, 10A, and 11.

No other built environment resources are located within the South Bay Planning District.

Planning District 8: Imperial Beach Oceanfront

The record search and additional research identified no built environment resources within PD8 that have been evaluated for listing in the NRHP or CRHR. Imperial Beach does not have a preservation ordinance or local historical resource register. The planning district contains no built environment resources that are currently considered historical resources. One structure within the planning district, the Imperial Beach Pier, was constructed in 1960. However, the pier was severely damaged in the 1980s and reconstructed in 1989. The reconstructed pier will be 50 years old in 2039. Several other built environment resources within this planning district were developed in the 1980s and 1990s. Historic aerial photographs indicate that Pier Park was created in the 1980s. Dunes Park and the Dempsey Holder Safety Center date to the 1990s. These built environment elements will reach the 50-year age mark in the 2030s and 2040s,

Planning District 9: Silver Strand

The record search and additional research identified no built environment resources within PD9 that have been evaluated for listing in the NRHP, CRHR, or a local historical resources register. The planning district contains no built environment resources that are currently considered historical resources. No elements of PD9's built environment are currently 50 years of age or older. Grand Caribe Island at the central portion of the planning district was created in the early 1970s. Historic aerial photographs indicate that the building near the center of the island and the east end of Grand Caribe Causeway was constructed in the 1970s, and that the building at the north end of the island, the Coronado Cays Yacht Club, dates to the early 1990s. Although Crown Island was created earlier, development did not occur there until the 1990s. The majority of the extant Crown Island built environment dates to that decade. Apart from the 1970s building on Grand Caribe Island, these built resources will not reach the 50-year age mark until the 2030s and 2040s.

Planning District 10: Coronado Bayfront

The record search and additional research identified no built resources in PD10 that have been evaluated for listing or listed on the NRHP or the CRHR. One resource consisting of a designed landscape and identified in Table 4.4-14, is listed on the Coronado Register of Historic Resources: Centennial Park, created in 1986. The park appears to be considered a historic site because it is the location of the original Coronado Ferryboat Terminal and includes a restored historic ticket booth at the southern portion of the property. Only the far northern portion of the park landscape is within the planning district.

Table 4.4-14. Previously Identified Built Environment Resources Within Planning District 10: Coronado Bayfront

Resource	Location	Year Built	Currently Qualifies as a Historical Resource Under CEQA (Yes/No)	Status Code
Centennial Park	1101 1 st Street, Coronado	1986	Yes	5S1

Notes:

California Historical Resource Status Code 1D: Contributor to a district or multiple resource property listed in the NRHP by the Keeper. Listed in the CRHR.

California Historical Resource Status Code 5S1: Individual property that is listed or designated locally (City of Coronado Register of Historical Resources).

One building within the Coronado Bayfront Planning District is 50 years of age or older: the Coronado Yacht Club's clubhouse, a repurposed military structure moved to its current location at the northwest shore of Glorietta Bay in 1947. Although the current clubhouse at the Coronado Golf Course dates to the 1990s and will not reach the 50-year age mark until the 2040s, the larger golf grounds created in the 1950s form a designed landscape that is over 50 years of age.

The majority of this planning district's built environment north of the San Diego-Coronado Bay Bridge dates to the 1980s and will reach the 50-year age mark in the 2030s. Buildings, complexes, and designed landscapes dating to the 1980s include the Ferry Landing Marketplace, the Coronado Island Marriot Resort and Spa, and Coronado Tidelands Park. Historic aerial photographs indicate that one building just east of the Ferry Landing Marketplace also dates to the 1980s.

Tribal Cultural Resources

Resources that are potential tribal cultural resources (TCRs) include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to Native Americans for religious, spiritual, or traditional uses. These can encompass the sacred character of physical locations (mountain peaks, springs, and burial sites) or particular native plants, animals, or minerals that are gathered for use in traditional ritual activities. The locations or physical remains of villages, camps and activity areas, burials, rock art, rock features, and traditional hunting, gathering, or fishing sites may also constitute TCRs. TCRs tend to fall into distinctive categories that relate to cosmology or activities that took place. They are found throughout the region, but tend to be physical geographic landmarks or in areas close to a water source or resources (such as materials for tool making or readily available food), and on flatter ground. TCRs can be found on the surface, or buried. Because the proposed PMPU area is highly developed, potential TCRs in the proposed PMPU area are likely to be archaeological sites representing the physical remains of past human activity. However, TCRs

would be identified through the course of government-to-government consultation between the District and an Assembly Bill (AB) 52 consulting tribe.

On April 26, 2017, ICF requested a review of Sacred Lands files from the Native American Heritage Commission (NAHC). The NAHC responded on April 27, 2017, stating that the Sacred Lands file failed to indicate the presence of Native American cultural resources in the planning districts. The NAHC also provided a list of 12 Native American individuals or organizations that may have knowledge of cultural resources in the proposed PMPU area. On May 10, 2017, outreach letters were sent to all 12 individuals and organizations identified by the NAHC. One response has been received to date. A letter dated May 16, 2017, was received from the Viejas Band of Kumeyaay Indians, which included the tribe's standard response requesting the presence of a Kumeyaay Cultural Monitor during ground-disturbing activities and to be informed of new developments that result in inadvertent discovery of artifacts or human burials. All correspondence is included in Appendix E.

To date, no Native American tribes have contacted the District requesting to be notified of District projects under AB 52, and no Native American tribes have requested AB 52 consulting party status on the PEIR.

The record search conducted by the SCIC on April 24, 2017, to identify cultural resources within the proposed PMPU area and its 0.25-mile buffer identified six archaeological sites from the prehistoric period (two in PD2, one in PD8, one in PD9, and two in PD10) that have not been evaluated for listing in the CRHR or as a unique archaeological resource (see *Archaeological Resources* above). A prehistoric archaeological resources may be considered a TCR by one or more Native American tribes; however, none of these resources have been previously identified as TCRs.

4.4.3 Laws, Regulations, Plans, and Policies

4.4.3.1 Federal

National Historic Preservation Act Section 106

Section 106 of the NHPA and its implementing regulations (36 Code of Federal Regulations [CFR] 800, as amended in 1999), require that Federal agencies and entities that they fund or license consider the effects of their actions on properties that are listed in the NRHP, or that may be eligible for such listing. To determine whether an undertaking could affect NRHP-eligible properties, cultural resources, including historical and architectural properties, must be inventoried and evaluated. Although compliance with Section 106 is the responsibility of the lead Federal agency, others can conduct the work necessary to comply.

The Section 106 review process consists of four steps.

1. Initiate the Section 106 process by establishing the undertaking, developing a plan for public involvement, and identifying other consulting parties.
2. Identify *historic properties* (resources that are eligible for inclusion in the NRHP) by determining the scope of efforts, identifying cultural resources in the area potentially affected by the project, and evaluating resources' eligibility for NRHP inclusion.

3. Assess adverse effects by applying the Section 106 criteria of adverse effect to identified historic properties.
4. Resolve adverse effects by consulting with the SHPO and other consulting agencies, including the Advisory Council on Historic Preservation if necessary, to develop an agreement that addresses the treatment of historic properties.

National Register of Historic Places

The NRHP is the nation's master inventory of known historic properties. It is administered by the National Park Service in conjunction with the SHPO. The NRHP includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, State, or local level. The NRHP criteria and associated definitions are outlined in National Register Bulletin 15, *How to Apply the National Register Criteria for Evaluation* (U.S. Department of the Interior, National Park Service 1988). The following is a summary of Bulletin 15.

Resources (structures, sites, buildings, districts, and objects) more than 50 years of age can be listed in the NRHP provided they meet the evaluative criteria described below. However, properties less than 50 years of age that are of exceptional importance or are contributors² to a district, and that also meet the evaluative criteria, can be included in the NRHP as well.

The NRHP includes four criteria under which a structure, site, building, district, or object can be considered sufficiently significant for listing on the NRHP.

- A. Resources associated with events that have made a significant contribution to the broad patterns of history.
- B. Resources associated with the lives of persons significant in our past.
- C. Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
- D. Resources that have yielded or may likely yield information important in prehistory or history.

Resources can be listed individually in the NRHP or as contributors to a historic district.

When nominating a resource to the NRHP, one must evaluate and clearly state the significance of that resource to American history, architecture, archaeology, engineering, or culture. A resource can be individually significant if it meets any of the above-stated criteria; only one criterion needs to be met for the eligibility of the resource to be considered.

A resource may be considered eligible for listing on the NRHP if it meets one or more of the above-stated criteria for significance and possesses integrity. Historic properties must retain their integrity

² A *contributor* is a building, site, structure, or object that adds to the historic associations or historic architectural qualities for which a property is significant. The contributor was present during the period of significance, relates to the documented significance of the property, possesses historic integrity, provides important information about a period, or independently meets the NRHP criteria. A *non-contributor* does not add to the historic associations or historic architectural qualities because it was not present during the period of significance; has experienced alterations, disturbances, additions, or other changes; or does not independently meet the NRHP criteria.

to convey their significance. Although the evaluation of integrity is sometimes a subjective judgment, it must always be grounded in an understanding of the resource's physical features and how they relate to its significance. The NRHP recognizes seven aspects or qualities, listed below, that define integrity.

- **Location:** the place where the historic property was constructed or the place where the historic event occurred.
- **Design:** the combination of elements that create the form, plan, space, structure, and style of a property.
- **Setting:** the physical environment of a historic property.
- **Materials:** the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- **Workmanship:** the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- **Feeling:** a property's expression of the aesthetic or historic sense of a particular period of time.
- **Association:** the direct link between an important historic event or person and a historic property.

To retain historic integrity, a resource should possess several of the above-stated aspects. The retention of specific aspects of integrity is essential for a resource to convey its significance. When the integrity of a resource is being evaluated, the resource should also be considered in comparison to similar properties; such comparison may be important for determining physical features that are essential to reflect the significance of a historic context.

4.4.3.2 State

California Environmental Quality Act and Public Resources Code Section 5024.1 (California Register of Historical Resources)

CEQA requires public agencies to evaluate the implications of their project(s) on the environment and includes significant historical resources as part of the environment. According to CEQA, a project that causes a *substantial adverse change* in the significance of a *historical resource* or a *unique archaeological resource* has a significant effect on the environment (State CEQA Guidelines Section 15064.5, PRC Section 21083.2).

CEQA defines a substantial adverse change as follows.

- Physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (State CEQA Guidelines Section 15064.5(b)(1)).
- Demolition or material alteration of the physical characteristics that convey the resource's historical significance and justify its designation as a *historical resource* (State CEQA Guidelines Section 15064.5(b)(2)(A)).

A historic resource is considered significant if it meets the definition of a historical resource or unique archaeological resource.

Historical Resources

The term historical resource includes but is not limited to any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (PRC Section 5020.1(j)). Historical resources may be designated as such through several different processes.

1. Determination of eligibility by the State Historical Resources Commission (State CEQA Guidelines Section 15064.5(a)(1)).
2. Designation of “historical significance” by a lead agency if the resource meets the criteria for listing on the CRHR (State CEQA Guidelines Section 15064.5(a)(3)).
3. Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC Section 5020.1(k)).
4. A local survey conducted pursuant to PRC Section 5024.1(g).
5. Listing in or eligibility for listing in the NRHP (PRC Section 5024.1(d)(1)).

The process for identifying historical resources is typically accomplished by applying the criteria for listing in the CRHR (California Code of Regulations [CCR], Title 14, Section 4852). The CRHR is very similar to the NRHP program. It was enacted in 1992, and its regulations became official January 1, 1998. The CRHR is administered by the Office of Historic Preservation and was established to serve as an authoritative guide to the State’s significant historical and archaeological resources (PRC Section 5024.1). State law provides that in order for a property to be considered eligible for listing in the CRHR, it must be significant under any of the following four criteria, which parallel NRHP criteria.

1. The property is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
2. The property is associated with the lives of persons important in our past.
3. The property embodies the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master or possesses high artistic values.
4. The property has yielded, or may be likely to yield, information important in prehistory or history.

Built environment resources that qualify as *historical resources* are generally 50 years old or older, unless it can be demonstrated that sufficient time has passed to understand the significance of a resource less than 50 years old (14 CCR 11.5, Section 4852 [d] [2]).

To be considered a historical resource for the purposes of CEQA, the resource must also have *integrity*, which is the authenticity of a resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.

Resources, therefore, must retain enough historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR (14 CCR 4852(c)).

Resources listed in the NRHP are automatically included in the CRHR.

Unique Archaeological Resources

Additionally, if a project can be demonstrated to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2(a), (b), and (c)). PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Assembly Bill 52 (Chapter 532, Statute of 2014)

AB 52 (Chapter 532, Statutes of 2014) establishes a formal consultation process for California Native American tribes as part of CEQA and establishes that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (PRC Section 21084.2). PRC Section 21074 defines tribal cultural resources as follows.

Sites, features, places, sacred places, and objects with cultural value to descendant communities or cultural landscapes defined in size and scope that are:

- Included in or eligible for listing in the CRHR; or,
- Included in a local register of historical resources.

A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.

Sacred places can include Native American sanctified cemeteries, places of worship, religious or ceremonial sites, and sacred shrines. In addition, both unique and non-unique archaeological resources, as defined in PRC Section 21083.2, can be tribal cultural resources if they meet the criteria detailed above. The lead agency relies upon substantial evidence to make the determination that a resource qualifies as a tribal cultural resource when it is not already listed in the CRHR or a local register.

AB 52 defines a “California Native American Tribe” (Tribe) as a Native American tribe located in California that is on the contact list maintained by the NAHC (PRC Section 21073). Under AB 52, and per PRC Section 21083.3.1, formal consultation with Native American tribes is required prior to determining the level of environmental document if a tribe has requested to be informed by the lead agency of proposed projects and if the Tribe, upon receiving notice of the project, accepts the opportunity to consult within 30 days of receipt of the notice. Per PRC Section 21080.3.2, AB 52 also

requires that consultation, if initiated, address project alternatives and mitigation measures for significant effects, if specifically requested by the Tribe. AB 52 states that consultation is considered concluded when either the parties agree to measures to mitigate or avoid a significant effect on tribal cultural resources, or when either the Tribe or the agency concludes that mutual agreement cannot be reached after making a reasonable, good-faith effort. Under AB 52, any mitigation measures recommended by the agency or agreed upon with the Tribe may be included in the final environmental document and in the adopted mitigation monitoring program if they were determined to avoid or lessen a significant impact on a tribal cultural resource. If the recommended measures are not included in the final environmental document, then the lead agency must consider the four mitigation methods described in PRC Section 21084.3(e). Any information submitted by a Tribe during the consultation process is considered confidential and is not subject to public review or disclosure. It will be published in a confidential appendix to the environmental document unless the Tribe consents to disclosure of all or some of the information to the public.

Health and Safety Code 7050.5/Public Resources Code 5097.9

Health and Safety Code 7050.5 addresses the protection of human remains discovered in any location other than a dedicated cemetery and makes it a misdemeanor for any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law, except as provided in PRC Section 5097.99. It further states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions concerning investigation of the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in PRC Section 5097.98. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact the NAHC by telephone within 24 hours. Whenever the NAHC receives notification of a discovery of Native American human remains from the county coroner, it shall immediately notify those people it believes to be the Most Likely Descendants of the deceased Native American. The descendants may inspect the site of the discovery and make recommendations on the removal or reburial of the remains. Per PRC Section 5097.94, the NAHC has the ability to identify and catalog places of known graves and cemeteries of Native Americans, and may mediate discussions between landowners and known Native American descendants relating to the treatment and disposition of Native American burials, skeletal remains, and items associated with Native American burials.

California Government Code Section 6254 (r) and 6254.10

California Government Code Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to “Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission.” Section 6254.10 specifically exempts from disclosure requests for “records that relate to archaeological site information and reports, maintained by, or in the possession of the

Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the Native American Heritage Commission, another State agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a State or local agency.”

4.4.3.3 Local

The District has not adopted any ordinance or regulation regarding cultural resources within its jurisdiction. Where appropriate, the District may consider the ordinances and regulations of adjoining jurisdictions applicable to cultural resources.

4.4.4 Project Impact Analysis

4.4.4.1 Methodology

The analysis of potential impacts on cultural resources relied on several sources to establish baseline cultural resources data. A record search was conducted by SCIC on April 24, 2017, to identify cultural resources (archaeological and historical resources) within the planning districts and a 0.25-mile buffer. The NAHC provided the results of a sacred lands file search of the proposed PMPU area on April 26, 2017. On May 10, 2017, due diligence outreach letters were sent to interested Native American representatives identified by the NAHC requesting any information on or concerns about cultural resources in the proposed PMPU area. A prehistoric archaeological sensitivity analysis of the proposed PMPU area was developed to understand the potential for prehistoric archaeological sites to be located in each planning district. Local historical resource registers were reviewed to identify historical resources or unique archaeological resources, and laws and regulations were reviewed.

Pursuant to PRC Section 21080.3.1 (AB 52), California Native American tribes traditionally and culturally affiliated with the proposed PMPU area can request notification of projects in their traditional cultural territory. The District has not received a request for project notification from any local Native American tribes. Additionally, the District has not received a specific request from a tribe to consult on the proposed PMPU under AB 52. Therefore, the TCR impact analysis is based on the cultural resources records search and the NAHC Sacred Lands File search conducted for the Draft PEIR.

4.4.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining the significance of impacts associated with cultural resources or TCRs resulting from implementation of the proposed PMPU. The determination of whether a cultural resources impact would be significant is based on the professional judgment of the District as Lead Agency supported by the recommendations of qualified personnel at ICF and is based on the evidence in the administrative record. The determination of whether a TCR impact would be significant is based on the professional judgment and discretion of the District as Lead Agency supported by substantial evidence thorough results of the NAHC Sacred Lands File Search and consultation with Native American tribes consulting under AB 52.

Impacts are considered significant if the project would result in any of the following.

1. Cause a substantial adverse change in the significance of a historical resource as defined by Section 15064.5 of the State CEQA Guidelines.
2. Cause a substantial adverse change in the significance of an archaeological resource as defined by Section 15064.5 of the State CEQA Guidelines.
3. Disturb any human remains, including those interred outside of formal cemeteries.
4. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
 - b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Threshold Methodology

Impacts on historical resources are determined based on the sensitivity or significance of identified historical resources and the direct and indirect impacts that would result from future development that could occur under buildout of the proposed PMPU. If significant direct or indirect impacts would occur on significant historical resources or unique archaeological resources, mitigation measures would be required.

Criteria to determine the NRHP/CRHR significance of historical resources and unique archaeological resources are summarized in Section 4.4.3. Physical effects on historical resources typically include direct disturbance and/or destruction of a resource and occur during construction. Aesthetic effects on historical resources typically consist of indirect impacts, such as changes to the visual or auditory landscape. The demolition or substantial alteration of a historical resource would constitute a significant impact.

For archaeological resources, including unique archaeological resources and TCRs of an archaeological nature, potential impacts could occur for future development projects that result in disturbance and/or destruction of previously recorded and/or undiscovered archaeological resources. The disturbance and/or destruction of archaeological resources would be considered a significant impact only if the resources are either an historical resource or a unique archaeological resource. Pursuant to State CEQA Guidelines Section 15064.5(c)(4), if an archaeological resource is neither a historical resource nor a unique archaeological resource, the effects of the project on the resource shall not be considered a significant effect on the environment and the EIR need only note both the resource and the project's effects on it.

Potentially significant impacts on TCRs include direct disturbance and/or destruction of historical resources or unique archaeological resources containing human remains that are identified as TCRs by a Native American consulting tribe and meet the criteria for listing in the CRHR or are

determined by a lead agency to be a TCR, or indirect impacts on the visual or auditory landscape, such as the construction of a building that blocks the view of a TCR or use of operational equipment that consistently produces noise. Any direct or indirect impact on human remains or TCRs would be considered a significant impact.

4.4.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policy would have the potential to avoid or reduce impacts associated with cultural resources and is considered in the impact analysis that follows.

WLU Policy 2.3.1. The District and its permittees shall support opportunities for strategic placement of interpretive informational signage and commemorative artifacts that convey Tideland's maritime and cultural history.

4.4.4.4 Project Impacts and Mitigation Measures

Threshold 1: Cause a substantial adverse change in the significance of a historical resource as defined by Section 15064.5 of the State CEQA Guidelines?

Impact Analysis

Construction

The proposed PMPU serves as a long-term planning blueprint for future development on District Tidelands. The PMPU would not directly result in the construction of any specific development projects or improvements. Instead, the proposed PMPU would guide and allow, subject to issuance of Coastal Development Permits or California Coastal Act exclusions, future development within the proposed PMPU area. It would do so by proposing water and land use designations that would allow for various types of development that meet the requirements within each of the planning districts and are consistent with the policies, objectives, and standards set forth by the proposed PMPU.

A small portion of one known historical resource, the salt ponds of the former Western Salt Company Salt Works, is located in PD7. The resource was the subject of HALS mitigation in 2001 and has since been altered. Table 3-9 lists allowable primary and secondary uses within PD7. As shown, there are no primary or secondary water and land uses that would potentially alter the small portion the resource within PD7. More generally, there is no future development planned in PD7 that could potentially cause a substantial adverse change in the significance of a known or yet-to-be identified historical resource.

Chapter 3, *Project Description*, lists the allowable primary and secondary water and land uses within PD1, PD2, PD3, PD4, PD8, PD9, and PD10. Chapter 3 also describes a future development scenario in these planning districts. PD2, PD3, PD4, and PD10 contain one or more known historical resources. The proposed PMPU does not plan for or authorize any specific development project that would cause a change in the known historical resources in PD2, PD3, PD4 and PD10. However, PD1, PD2, PD3, PD4, PD8, PD9, and PD10 all contain built resources that will reach the 50-year age benchmark for consideration as potential historical resources under CEQA within the next 35 years. Known and potential historical resources within PD1, PD2, PD3, PD4, PD8, PD9, and PD10 include buildings, structures, art objects, maritime vessels, historic districts, and cultural landscapes formed of

multiple built resources (such as parks and other waterfront spaces). For these reasons, construction activities associated with the future development allowable under the primary and secondary water and land uses, visions, and planned improvements (which includes appealable projects) have the potential to cause substantial adverse change in the significance of a known or yet-to-be identified historical resource within PD1, PD2, PD3, PD4, PD8, PD9, and PD10 resulting in demolition, destruction, relocation, or alteration of the resources or their immediate surroundings, which would be considered a significant impact (**Impact-CUL-1**).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction-related impact on historical resources (**Impact-CUL-1**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

The Waterfront Destination Park that could be developed under Option 1 would be located along the esplanade near Navy Pier, between the Navy Broadway Complex and the waterfront. Development of a Waterfront Destination Park at this location would entail new construction in close or relatively close proximity to buildings or structures 50 years old or older that qualify as historical resources, or that have potential to qualify as historical resources subject to formal evaluation, if necessary, depending on project-level details. Therefore, construction activities associated with Option 1 could have the potential to cause substantial adverse change in the significance of a known or yet-to-be identified historical resource, which is considered a significant impact (**Impact-CUL-1**).

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction-related impact on historical resources (**Impact-CUL-1**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would not propose any changes to water or land uses that would result in any development of uses that would be different than those described above as it relates to historical resources. As a result, construction activities would generally be the same as those described above. The parcel bounded by North Harbor Drive, West Hawthorne Street, West Grape Street, and Pacific Highway, which would be converted to Recreation Open Space under Option 2, is a parking lot containing no buildings or structures with potential to be considered historical resources. However, buildings and structures over 50 years of age are present within the 205-foot setback from the east side of the present North Harbor Drive alignment between Hawthorne Street and the prolongation of B Street, including a fountain and other landscape

features that contribute to the significance of the NRHP-listed County Administration Center. Therefore, construction activities associated with Option 2 have the potential to cause substantial adverse change in the significance of a known or yet-to-be identified historical resource, which would be considered a significant impact (**Impact-CUL-1**).

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction-related impact on historical resources (**Impact-CUL-1**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

The additional properties include 1220 Pacific Highway (currently leased by the Navy) and the Wyndham San Diego Bayfront Hotel, both of which contain buildings 50 years old or older, and a small portion of the park between the County Administration Center (CAC) and North Harbor Drive. The CAC is listed on the NRHP, and the park contains a fountain and other landscape features that contribute to the property's significance. The analysis is programmatic at this time because no specific project is proposed and details are not yet known. However, changes to spatial relationships have the potential to cause a substantial adverse change in the significance of the CAC. There are three contributing features of the CAC: the Administration building, the Guardian of Water sculpture and fountain, and the landscaping. Specific project designs that would cause alteration or damage to the contributors, such as demolishing or relocating the sculpture/foundation or bringing Harbor Boulevard closer to the Administration Building, would be considered substantial adverse changes in the significance of the CAC.

Once specific project-level design is determined, specific impacts would be analyzed and appropriate mitigation measures would be developed. Such mitigation measures could include Historic American Buildings Survey (HABS)/Historic American Engineering Record (HABS/HAER) level documentation of the district as well as the contributing building and structure, Historic American Landscape Survey (HALS) documentation, relocation and/or rehabilitation plans for landscape elements, a pre-construction/post-construction survey, and construction monitoring plan. Recordation would need to be to National Park Service standards, and any rehabilitation would need to meet the Secretary of the Interior's Standards for Rehabilitation. All work would need to be conducted by persons meeting the Secretary of the Interior's Professional Qualification Standards. Even then, however, mitigation may not lower this impact to less than significant.

Therefore, construction activities associated with Option 3 have the potential to cause substantial adverse change in the significance of a known or yet-to-be identified historical resource, which is considered a significant impact. This would be a more severe significant impact than buildout of the proposed PMPU without Option 3 (**Impact-OPT3-CUL-1**).

Operation

Activities associated with future development projects consistent with the proposed PMPU that have the potential to result in impacts on historical resources are limited to construction. Foreseeable operations associated with allowable primary and secondary water and land uses, and with development assumptions outlined in the tables specified above, do not have the potential to cause a substantial adverse change in the significance of a known or yet-to-be identified historical resource within all of the planning districts in the proposed PMPU area. To cause such a change, the

operations would need to produce substantial changes in the setting of a historical resource apart from construction, and the setting would need to be a highly sensitive character-defining feature of the resource and its historical significance. It is possible for operations that introduce new levels of noise or nighttime light to the setting of a historical resource to have a significant impact if the setting is a character-defining feature without which the resource would have a diminished capacity to convey its significance. It is highly unlikely that any of the planning districts contain the types of historical resources that would prove sensitive to changes in setting from operations that substantially increase noise or nighttime light. More importantly, foreseeable planned improvements and allowable water and land uses would not dramatically change existing development patterns and water and land uses within the planning districts. For example, the kinds of large-scale noise-generating industrial shipyards present within PD4, Working Waterfront, would not be introduced to planning districts characterized by existing development and water and land uses oriented to recreation and retail. For these reasons, operations associated with the proposed PMPU are not anticipated to cause an adverse change in the significance of a historical resource. Additionally, future development under the proposed PMPU generally would require discretionary approval from the District (e.g., Coastal Development Permit) and would be subject to site-specific project-level CEQA review pursuant to State CEQA Guidelines Section 15168.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on historical resources during operation.

The types of development activities that have the potential to result in impacts on historical resources are limited to construction. To cause a substantial adverse change in the significance of a known or yet-to-be identified historical resource, the operations would need to produce substantial changes in the setting of a historical resource apart from construction, and the setting would need to be a highly sensitive character-defining feature of the resource and its historical significance. Operations under Option 1 would consist of routine maintenance and upkeep of the Waterfront Destination Park, similar to other existing parks on District Tidelands, and therefore would not involve any activities that would have the potential to cause a substantial adverse change in the significance of a historical resource. Similarly, none of the other components of Option 1, including the closure of North Harbor Drive from the prolongation of West G Street to Broadway and the corresponding removal of parking, would have the potential to impact historical resources during operation. Therefore, operational impacts under Option 1 would be less than significant, and operations under Option 1 would not result in any additional or more severe impacts than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on historical resources during operation.

The types of development activities that have the potential to result in impacts on historical resources are limited to construction. To cause a substantial adverse change in the significance of a known or yet-to-be identified historical resource, the operations would need to produce substantial changes in the setting of a historical resource apart from construction, and the setting would need to be a highly sensitive character-defining feature of the resource and its historical significance. Operation of Option 2 would consist of routine maintenance and upkeep of the expanded Lane Field Setback Park, similar to other existing parks on District Tidelands, and therefore would not involve any activities that would have the potential to cause a substantial adverse change in the significance of a historical resource. Therefore, operational impacts under Option 2 would be less than significant, and operations under Option 2 would not result in any additional or more severe impacts than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on historical resources during operation.

Operation of Option 3 would consist of routine maintenance and upkeep of the additional park space added under this option, similar to other existing parks on District Tidelands, and therefore would not involve any activities that would have the potential to cause a substantial adverse change in the significance of a historical resource. Therefore, operational impacts under Option 3 would be less than significant, and operations under Option 3 would not result in any additional or more severe impacts than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in substantial adverse change in the significance of a historical resource as defined by Section 15064.5 of the State CEQA Guidelines. WLU Policy 2.3.1 involves supporting the placement of interpretive signage and artifacts, which would not result in adverse physical impacts, but could be beneficial to the treatment of such resources should they occur. This policy is also consistent with **MM-CUL-1** where interpretation may be required in the event that impacts occur.

Impact Determination and Mitigation

Construction activities associated with future development allowed under the proposed PMPU have the potential to cause a substantial adverse change in the significance of a historical resource as defined by Section 15064.5 of the State CEQA Guidelines.

Significant Impacts

Impact-CUL-1: Future Construction Activities Within the Proposed PMPU Area May Adversely Impact Current and Future Significant Historical Resources. Future construction activities consistent with the proposed PMPU would have the potential to:

1. Demolish a historical resource.
2. Alter a historical resource such that it no longer retains sufficient historical integrity to convey significance.
3. Alter the setting of a historical resource for which the setting is in important character-defining feature that expresses the resource's significance.

Any one of these outcomes would be considered a significant impact on a historical resource.

Impact-OPT3-CUL-1: Future Construction Activities Associated with Option 3 May Adversely Impact Current and Future Significant Historical Resources Within North Embarcadero.

Future construction activities associated with Option 3 would have the potential to impact the County Administration Center (CAC), which is listed on the NRHP and the CRHR, as well as structures that are over or will be over 50 years old, by:

1. Demolishing contributing elements of a historical resource;
2. Altering a historical resource such that it may no longer retains sufficient historical integrity to convey significance;
3. Altering the setting of a historical resource for which the setting is in important character-defining feature that expresses the resource's significance.

Any one of these outcomes would be considered a significant impact on a historical resource.

Mitigation Measures

The mitigation measures below apply to **Impact-CUL-1** and **Impact-OPT3-CUL-1**.

MM-CUL-1: Conduct a Historical Resource Assessment. Concurrently with any application submitted to the District for development activity that may cause a substantial adverse change, as defined in State CEQA Guidelines Section 15064.5(b)(1), in the significance of a historical resource, the project proponent shall be required to submit a historical resource assessment prepared by a Secretary of the Interior's (SOI) Standards-qualified architectural historian approved by the District. Development activities that could cause a substantial adverse change in the significance of a historical resource include those that would potentially demolish or diminish the historical integrity of a building or structure that is equal to or greater than 50 years old, or which will be equal to or greater than 50 years old at the time disturbance of the building or structure occurs.

In order to determine if there are one or more historical resources in a proposed project, the historical resource assessment shall be completed according to the following steps: (i) define an appropriate historical resources study area for the proposed project, (ii) survey and research the area to identify built resources known to qualify as historical resources under CEQA as a result of previous designation, and (iii) formally evaluate built resources not previously designated that could potentially qualify as historical resources under CEQA by applying the criteria for listing in the CRHR (14 CCR 4852). The study area shall account for potential direct and indirect impacts on historical resources, including alterations to the immediate setting of any historical resource that could cause an adverse change in the resource's significance. Based on the historical resource assessment and analysis of project activities, the District shall determine if any built environment resources qualifying as historical resources will be subject to

potentially significant impacts from the project as defined by Section 15064.5(b)(1) of the State CEQA Guidelines. The District shall determine that a future project may have a significant impact on a historical resource if the proposed project:

- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR (State CEQA Guidelines Section 15064.5[b][2][A]), or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to PRC Section 5024.1(g), unless the District reviews the effects of the project and establishes by a preponderance of evidence that the resource is not historically or culturally significant (State CEQA Guidelines Section 15064.5[b][2][B]), or
- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR was determined by the District for purposes of CEQA (State CEQA Guidelines Section 15064.5[b][2][C]).

If the proposed project would directly or indirectly impact an historical resource, the District shall identify feasible mitigation measures appropriate to avoid, minimize, or otherwise substantially reduce significant impacts. Mitigation measures shall include one or more of the following, in the following order of preference:

1. **Avoidance.** The project proponent shall avoid demolition or materially altering the historical resource by avoidance measures, such as the following:
 - Establish environmentally sensitive areas, including all or part of a historical resource depending on its spatial relationship to project activities, and arrange for them to be identified and protected by clearly defined barriers during construction to ensure avoidance.
 - Conduct a construction condition assessment(s) or Historic Structure Report(s) of historical resources adjacent to construction to determine if those resources are at risk of being damaged, including a determination of tolerable levels of construction vibration and potential for damage.
 - Redesign relevant portions of the proposed project to avoid destruction or damage to the historical resource.
 - Design and implementation of stabilization measures to ensure that fragile built resources are not damaged by construction activities, and that any stabilization measures are implemented in accordance with SOI Standards for the Treatment of Historic Properties (USDI NPS 2020).
 - Temporarily move built resources.

In implementing avoidance measures, the project proponent shall arrange for an SOI-qualified architectural historian or historic architect, approved by the District, to participate in preconstruction meetings and construction monitoring activities to ensure continuing adherence to avoidance measures.

2. **Alteration of Historical Resources in Accordance with SOI Standards.** If the District determines that a project cannot avoid a historical resource, the project proponent shall

- design the proposed project to comply with SOI Standards for the Treatment of Historic Properties (SOI Standards) and thereby avoid any impacts that could cause an adverse change in the significance of a historical resource (USDI NPS 2020). The project proponent shall retain an SOI-qualified architectural historian or historic architect (approved by the District) to identify the applicable SOI Standards, assist in the project design, review the design plans, and provide a written report to the District assessing the design plans' compliance with the applicable SOI Standards. The District shall review the report and confirm the design plans' compliance with the applicable SOI Standards. The project proponent shall adhere to the design plan approved by the District. This will ensure that alterations to the historical resource are implemented in accordance with the SOI Standards and that the historical resource retains sufficient character-defining features to express its historical significance.
3. **Relocation.** If the District determines that it would not be feasible to minimize significant impacts on a historical resource through avoidance or by designing the project to comply with the SOI Standards, the project proponent shall retain a District-approved, SOI-qualified historic architect or architectural historian to provide measures and oversight for the relocation of a significant historic building that would otherwise be demolished, altered, or subject to neglect and deterioration if the proposed project is implemented. The SOI-qualified professional shall prepare a historic building relocation plan at the project proponent's expense. The relocation plan shall identify the site where the resource would be relocated as well as all relevant permits required for the resource to be moved from its existing location and transported to the relocation site. The relocation plan shall identify the qualifications required of the building relocation company to ensure that relocation is undertaken by a company experienced in moving historic buildings comparable to the building subject to potential significant impacts from the proposed project. The relocation plan shall ensure that the building will be moved without irreparable damage to the character-defining historic fabric of the building and shall specify protective measures for vulnerable character-defining features. The project proponent shall incorporate into construction specifications for the proposed project a requirement that the building relocation company and the construction contractor(s) use all feasible means to avoid damage to the historic building during its relocation, including, but not limited to, relocation methods and relocation activity routes, closures, and timing. The District shall review and provide final approval of the historic building relocation plan. The project proponent shall implement the relocation plan.
 4. **Historical Resource Archival Documentation.** If the District determines that it would not be feasible to minimize significant impacts on a historical resource through avoidance, designing the project to comply with the SOI Standards, or relocation of the historical resource, archival documentation shall be prepared if the resource is the type of historical resource for which archival documentation would reduce the impact. Historical resources for which archival documentation can reduce an impact are generally those recognized as significant (i) for their architectural design or engineering qualities; (ii) for exemplifying the work of a master architect, builder, or engineer; or (iii) for embodying the distinctive characteristics of a type, period, or method of construction. The level of archival documentation shall be determined by the District based on the evidence in the record. The project proponent shall arrange for the preparation of archival documentation of the historical resource by an SOI-qualified architectural historian or historian and a professional

- photographer, approved by the District, at the project proponent's expense. The documentation shall consist of archival photography, written data (physical description and historical narrative), and, depending on the historical resource's level of significance, measured drawings to be distributed to one or more appropriate local repositories. Potentially appropriate repositories include the San Diego Public Library, the San Diego History Center, other local historical societies, the San Diego Maritime Museum, and local university library special collections. Archival documentation of historical resources shall be prepared in accordance with the National Parks Service's (NPS) guidelines for Historic American Buildings Survey (HABS) Historic American Landscape Survey (HALS) and Historic American Engineering Record (HAER) documentation. The level and degree of documentation shall be determined by the District and shall be commensurate with the size, extent, and level of the documented historical resource's significance. The District shall review and approve all archival documentation prepared as historical resource mitigation prior to its submittal to the chosen repository or repositories. The project proponent shall submit the District-approved archival documentation and confirm its receipt by the repository or repositories.
5. **Interpretation.** If it is not feasible to minimize significant impacts on a historical resource through avoidance, designing the project to comply with the SOI Standards, or relocation of the historical resource, as determined appropriate by the District the project proponent shall arrange for a District-approved SOI-qualified architectural historian or historian to prepare appropriate historical resource interpretive or educational media at the project proponent's expense. Historical resources for which interpretive or educational media would reduce the impact are generally those that have significance for (i) direct association with an event or pattern of events important to history, or (ii) for direct association with the life of a historically significant individual. The type of interpretive or educational media shall be determined by the District based on the evidence in the record. The SOI-qualified preservation professional shall work with the District and the project proponent to determine the type of interpretive media that is appropriate for the impacted historical resource. Such interpretive or educational media may include displays in public spaces, print materials, or websites. Interpretive and educational media may incorporate written, photographic, and archival documentation (such as those compiled according to NPS HABS/HAER/HALS guidelines) oral history interviews, video, or animation to tell the story of the heritage represented by the impacted resource. At the expense of the project proponent, the District-approved SOI-qualified historic preservation professional shall prepare the chosen type of interpretive or educational media with District approval. The District shall review the interpretive or educational media prior to final approval. The project proponent shall be responsible for displaying or providing public access to the interpretive or educational media.
6. **Materials Salvage.** If it is not feasible to minimize significant impacts on a historical resource through avoidance, designing the project to comply with the SOI Standards, or relocation of the historical resource, and a historical resource is subject to complete or partial demolition from a proposed project, the project proponent shall arrange for salvage of historically important materials as deemed appropriate by the District. The project proponent shall arrange for a District-approved SOI-qualified historic preservation professional (historic architect or architectural historian in this case) to assess portions of the historical resource to be demolished to identify important salvageable materials. These

may include materials that a historic preservation organization may be interested in using to restore an architecturally similar building, materials or objects that may be used in interpretive or educational media, or objects of interest to historical societies. The District-approved historic preservation professional shall prepare a materials salvage plan at the expense of the project proponent and shall coordinate with potentially interested preservation organizations and historical societies as deemed appropriate by the District and the project proponent. The District shall review and provide final approval of the materials salvage plan. The project proponent shall be responsible for implementation of the materials salvage plan.

Level of Significance After Mitigation

Mitigation measure **MM-CUL-1** would reduce impacts on historical resources (**Impact-CUL-1**) by requiring future development projects to prepare a historical resources assessment that will identify any historical resources that may be subject to significant impacts. **MM-CUL-1** ensures implementation of appropriate mitigation measures such as avoidance and protection, altering historical resources in accordance with SOI Standards, relocation, archival documentation of historical resources in accordance with HABS/HAER/HALS guidelines, interpretative or educational media, and materials salvage. Measures such as avoidance and protection, designing the project in accordance with SOI Standards, and/or relocation of the historical resource can mitigate impacts to a less-than-significant level. In some cases, it may prove necessary to implement one or more of those measures along with archival documentation, interpretive or educational media, and/or materials salvage to reduce impacts to a less-than-significant level. However, because the location, nature, scope, and effects of future development proposals are not known at this time, it is not possible to state with certainty that **MM-CUL-1** would avoid or reduce impacts to less than significant. Therefore, **Impact-CUL-1** and **Impact-OPT3-CUL-1** would be considered significant and unavoidable after mitigation.

Threshold 2: Cause a substantial adverse change in the significance of an archaeological resource as defined by Section 15064.5 of the State CEQA Guidelines?

Impact Analysis

As described in State CEQA Guidelines Section 15064.5(c) (1-4), during the review of a future development project, the District shall first determine whether the site is an historical resource. If an archaeological site does not meet the criteria for definition as an historical resource, the District shall then determine whether the site meets the definition of a unique archaeological resource. If the site is neither an historical resource nor a unique archaeological resource, then impacts on the resource would generally not be considered significant. If the archaeological site is an historical resource, and where impacts may occur to a historical resource, the District would consider mitigation in accordance with Section 15126.4(b) of the State CEQA Guidelines and mitigation measure **MM-CUL-2**. If an archaeological site is not a historical resource but meets the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site would be treated in accordance with the provisions of Section 21083.2.

Construction

The record search results for all planning districts in the proposed PMPU area show that six prehistoric and nine historic period archaeological resources, as well as 1 resource consisting of prehistoric and historic period archaeological deposits, have been previously identified within the seven planning districts. One archaeological resource in PD2 and three in PD3 have been determined not eligible for listing in the NRHP/CRHR and are not unique archaeological resources; therefore, no further CEQA analysis is required for those resources. The remaining 12 archaeological resources (four in PD3, two in PD4, one in PD8, two in PD9, and three in PD10) have never been evaluated for listing in the CRHR; therefore, it is unknown if any of these resources meet the criteria for CRHR eligibility or if they meet the requirements of a unique archaeological resource. There are no future development projects in PD7 that could potentially cause a substantial adverse change in the significance of a known or yet-to-be identified archaeological resource.

As detailed above in Section 4.4.2, *Existing Conditions*, under *Archaeological Resources*, all but one of the planning districts, PD4, have low prehistoric archaeological sensitivity, primarily because the majority of the planning districts lack uplands, on the landward side of the shoreline, which would be suitable for a wide range of land use activities, including resource collection, resource processing, and habitation. However, archaeological resources have been reported in the planning districts along the landward/seaward interface. Additionally, based on review of the archaeological sites records for sites within the planning districts, some site records are based on anecdotal information or information that lacks mapping; therefore, the locations of these resources would need to be verified at the project level.

Two planning districts contain areas of archaeological sensitivity indicated by previous discoveries. One of these, the former Tidelands City Dump (P-37-017104/CA-SDI-15118) at the southern portion of PD3, has historic archaeological sensitivity. The other is a prehistoric site (P-37-005931/CA-SDI-5931) that consists of a large artifact scatter and Native American burial at least partially located within the 10.29-acre area of high prehistoric sensitivity in PD4. Otherwise, PD4 has low prehistoric archaeological sensitivity. Apart from the 10.29-acre portion of PD4, the planning districts contain no other areas of high prehistoric archaeological sensitivity. Although PD3 has low prehistoric archaeological sensitivity, and PD4 has low archaeological sensitivity with the exception 10.29 acres, both have long histories of urban and industrial development that give them greater historic archaeological sensitivity than any of the other planning districts, particularly on the landward side of the pre-development shoreline in portions of PD3 and PD4. While one landward prehistoric archaeological site intersects with the edge of PD2, the planning district is composed of fill from the 1960s. Other than the boundary of the planning district that intersects with landward portions of the predevelopment shoreline, the archaeological sensitivity of PD2 is low. Although it is unlikely that significant subsurface archaeological deposits are present within the proposed PMPU area, it is not possible to rule out the presence of such resources in those planning districts.

For these reasons, construction activity associated with future development allowed under the proposed PMPU has the potential to cause substantial adverse change in the significance of a known or yet-to-be identified prehistoric or historic archaeological resource within all planning districts in the proposed PMPU area; therefore, impacts are considered significant (**Impact-CUL-2**).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction and operation of a Waterfront Destination Park. The implementation of this option would result in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact on archaeological resources during construction of future development (**Impact-CUL-2**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

PD3 has low prehistoric archaeological sensitivity, but has a long history of urban and industrial development, and there are four previously recorded but unevaluated historic period archaeological sites in the planning district, which increases the potential for historic archaeological sensitivity, particularly the landward side of the pre-development shoreline. Construction of a Waterfront Destination Park under Option 1 would involve landside ground-disturbing activities that could cause a substantial adverse change in the significance of known or yet-to-be identified prehistoric or historic archaeological resources, which would be considered a significant impact (**Impact-CUL-2**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreation Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact on archaeological resources during construction of future development (**Impact-CUL-2**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

As noted, PD3 has low prehistoric archaeological sensitivity, but has a long history of urban and industrial development, and there are four previously recorded but unevaluated historic period archaeological sites in the planning district, which increases the potential for historic archaeological sensitivity, particularly the landward side of the pre-development shoreline.

Option 2 would not propose any changes to water or land uses that would result in any development of uses that would be different than those described above as it relates to historical resources. As a result, construction activities would generally be the same as those described above. Therefore, ground-disturbing construction activities associated with Option 2 would also have the potential to cause substantial adverse change in significance of a known or yet-to-be identified prehistoric or historic archaeological resources, which would be considered a significant impact (**Impact-CUL-2**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact on archaeological resources during construction of future development (**Impact-CUL-2**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

As noted, PD3 has low prehistoric archaeological sensitivity, but it has a long history of urban and industrial development, and there are four previously recorded but unevaluated historic period archaeological sites in the planning district, which increases the potential for historic archaeological sensitivity, particularly the landward side of the pre-development shoreline.

Option 3 would not propose any changes to water or land uses that would result in any development of uses that would be different than those described above as it relates to historical resources. As a result, construction activities would generally be the same as those described above. Ground-disturbing construction activities for this option would be required for the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, as well as any new park space. Therefore, ground-disturbing construction associated with Option 3 would also have the potential to cause substantial adverse change in significance of a known or yet-to-be identified prehistoric or historic archaeological resources, which would be considered a significant impact (**Impact-CUL-2**).

However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Operation

Only ground-disturbing construction activities facilitated by the proposed PMPU have the potential to result in impacts on archaeological resources. Foreseeable operations associated with development of water and land uses are not expected to include ground disturbances and therefore do not have the potential to cause a substantial adverse change in the significance of a known or yet-to-be identified archaeological resource within the proposed PMPU area. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on archaeological resources associated with operation of future development.

Also, as noted, only ground-disturbing construction activities have the potential to result in impacts on archaeological resources. As such, operation of a Waterfront Destination Park under Option 1 would not cause a substantial adverse change in the significance of a known or yet-to-be identified archaeological resource. Therefore, operational impacts under Option 1 would be less than significant, and operations under Option 1 would not result in any additional or more severe impacts on archaeological resources than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on archaeological resources associated with operation of future development.

Also, as noted, only ground-disturbing construction activities have the potential to result in impacts on archaeological resources. As such, operation of the expanded Lane Field Setback Park under Option 2 would not cause a substantial adverse change in the significance of a known or yet-to-be identified archaeological resource. Therefore, operational impacts under Option 2 would be less than significant, and operations under Option 2 would not result in any additional or more severe impacts on archaeological resources than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on archaeological resources associated with operation of future development.

Also, as noted, only ground-disturbing construction activities have the potential to result in impacts on archaeological resources. As such, operation of additional park space added under Option 3 would not cause a substantial adverse change in the significance of a known or yet-to-be identified archaeological resource. Therefore, operational impacts under Option 3 would be less than significant, and operations under Option 3 would not result in any additional or more severe impacts on archaeological resources than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in substantial adverse change in the significance of an archaeological resource as defined by Section 15064.5 of the State CEQA Guidelines. WLU Policy 2.3.1 involves supporting the placement of interpretive signage and artifacts, which would not result in adverse physical impacts, but could be beneficial to the treatment of such resources should they occur. This policy is also consistent with mitigation measure **MM-CUL-2** where treatment may be required in the event that impacts occur.

Impact Determination and Mitigation

Ground-disturbing activities associated with construction of future development projects allowable under the proposed PMPU have the potential to cause a substantial adverse change in the significance of an archaeological resource that is a historical resource as defined by Section 15064.5(a) of the State CEQA Guidelines, or qualifies as a unique archaeological resource under PRC 20183.2(g).

Significant Impacts

Impact-CUL-2: Future Ground-Disturbing Activities Within the Proposed PMPU Area May Adversely Impact Archaeological Resources that are Historical Resources or Unique Archaeological Resources. Ground-disturbing activities associated with future development allowed under the proposed PMPU would have the potential to damage or destroy archaeological resources that are historical resources (as defined in State CEQA Guidelines Section 15064.5(a)) or qualify as a unique archaeological resource (as defined in PRC Section 20183.2(g)), which would be considered a significant impact.

Mitigation Measures

For **Impact-CUL-2**:

MM-CUL-2: Conduct an Archaeological Resource Assessment. Prior to any approval of a future discretionary project (as defined by the State CEQA Guidelines Section 15357) with ground-disturbing activities, the project proponent shall retain an SOI-qualified archaeologist to prepare an Archaeological Resources Assessment (ARA), which shall be submitted to the District for its review and approval. The ARA is a preliminary inquiry into the potential for

archaeological resources being present on site and will assist the District in determining if a future project may or may not have an effect on archaeological sites that are historical resources or unique archaeological resources, per State CEQA Guidelines Section 15064.5(1-4) and PRC Section 21083.2(g).

In order to determine if there are one or more archaeological historical resources or unique archaeological resources in a proposed project, the ARA shall be completed according to the following steps:

1. **Desktop Analysis.** The ARA shall define an appropriate archaeological study area for the proposed project, and research the study area to determine its sensitivity for subsurface archaeological resources. Research shall include but is not limited to reviewing the prehistoric archaeological sensitivity analysis under Archaeological Resources in Section 4.4.2 of the PMPU PEIR, a records search, and a review of historic maps such as Sanborn fire insurance and U.S. Geological Survey (USGS) topographic maps. The ARA shall make recommendations regarding the need for further archaeological studies to be completed. If the ARA shows to the District's satisfaction that the study area consists entirely of fully developed fill with no undisturbed land, or entirely of land with little or no potential for subsurface prehistoric or historic archaeological resources preserved within depositional context, no field survey, additional study, or measures for protecting archaeological resources that are historical resources, or qualify as a unique archaeological resource, would be necessary. A brief ARA memo shall serve as documentation of the findings.

Based on the information and recommendations provided in the ARA memo, if further archaeological studies are required, the project proponent shall take one or more of the following sequential actions, which are determined by the District to be necessary to avoid or reduce the proposed project's impacts on archaeological resources that are historical resources, or qualify as a unique archaeological resource, to a level below significance:

1. **Archaeological Survey.** If the ARA finds that the study area contains previously identified prehistoric or historic archaeological resources preserved in depositional context, undeveloped land with undisturbed or minimally disturbed surface soils, or historic archaeological resource potential based on historic map research, the project proponent will retain an SOI-qualified archaeologist (approved by the District) to conduct a preconstruction archaeological resources field survey of the project area.
2. **Archaeological Testing and Evaluation.** If the District determines that the resource cannot be avoided through project design, the SOI-qualified archaeologist retained by the project proponent shall implement an evaluative subsurface testing program to determine the resource boundaries within the project area, assess the site's eligibility for listing in the NRHP and CRHR, or for its potential to be a unique archaeological resource, and assess the integrity of the resource, all subject to verification and approval from the District. The testing and evaluation program shall be used to determine whether the site is a historical resource or unique archaeological resource. The SOI-qualified archaeologist shall prepare an Archaeological Survey Evaluation Report (ASER) at the conclusion of the field survey and evaluative subsurface testing program. The ASER will conform with the California Office of Historic Preservation (OHP) recommended contents and format for cultural resources reports. The report shall be submitted to the District for review and, upon the District's determination that the report is satisfactory, shall be deposited at the SCIC.

- If the District determines the site is not a historical resource or a unique archaeological resource, the effects of the project on the resource shall not be considered a significant effect on the environment and need not be considered further in the CEQA process, per State CEQA Guidelines Section 15064.5(c)(4). If the archaeological site is a historical resource, and where impacts may occur to a historical resource, the District would require one or more of the following measures in **MM-CUL-2**. If an archaeological site is not a historical resource but meets the definition of a unique archeological resource in Section 21083.2 of the PRC, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in PRC Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
3. **Preservation in Place.** Preservation in place is the preferred manor of mitigating impacts on archaeological historical resources and unique archaeological resources. If the District determines the site is a historical resource or unique archaeological resource, and the project can be designed to avoid the historical resource or unique archaeological resource, preservation in place may be accomplished by, but not limited to: planning construction to avoid the resource; incorporating sites within parks, greenspace, or open space; covering the site with chemically stable soil prior to construction; or deeding the site into a permanent conservation easement, per State CEQA Guidelines Section 15126.4(b)(3)(A) – (B) and PRC Section 21083.2(b).
 4. **Archaeological Data Recovery.** If the District determines the site is a historical resource, preservation in place is not possible, and data recovery is the only feasible mitigation, an archaeological Data Recovery Plan (DRP) will be designed to record and remove scientifically important data that would otherwise be destroyed through construction-related ground disturbance, per State CEQA Guidelines 15126.4(b)(3)(C). The DRP and data recovery fieldwork will be completed prior to the start of project construction. After the archaeological data recovery fieldwork is complete, the SOI-qualified archaeologist retained by the project proponent shall prepare an archaeological data recovery report (DRR). The report will conform with the California Office of Historic Preservation (OHP) recommended contents and format for cultural resources reports. The report shall be submitted to the District for review and, upon the District’s determination that the report is satisfactory, shall be deposited at the SCIC. Any artifacts collected during data recovery will be curated at the San Diego Archaeological Center, at the project proponent’s expense. Per State CEQA Guidelines Section 15126.4(b)(3)(D), if the District determines that testing or studies already completed have adequately recovered the scientifically important information from and about the archaeological or historical resource, data recovery will not be required, provided that the determination is documented and that the studies are deposited with the SCIC.
 5. **Archaeological Construction Monitoring.** In the event the District determines that archaeological construction monitoring is necessary in order to mitigate the potential for project construction to impact as-yet unknown archaeological resources, then the project proponent shall retain an SOI-qualified archaeologist, approved by District. At its discretion, the District may require a Native American monitor also be present during ground-disturbing construction activities. During project-specific environmental review, the approved SOI-qualified archaeologist shall prepare and submit to the District for approval an Archaeological Monitoring and Discovery Plan (AMDP). The AMDP shall describe the

project, archaeological sensitivity of and known archaeological resources in the project area, monitor qualifications, monitoring and discovery procedures, roles and responsibilities, and reporting. Upon completion of archaeological construction monitoring, a Final Monitoring Report (FMP) shall be prepared in conformance with the OHP's guidelines for the preparation of cultural resources management reports and will be deposited at the SCIC. Any diagnostic artifacts collected during archaeological construction monitoring will be curated at the San Diego Archaeological Center, at the project proponent's expense.

6. **Unanticipated Discovery Procedures.** For those projects where there is the potential for encountering unknown archaeological resources, if an unanticipated discovery of an archaeological resource occurs during construction of a project, construction-related ground disturbance would be diverted or temporarily halted until the SOI-qualified archaeologist can assess if it is a historical resource or a unique archaeological resource. The District, based on information provided by the SOI-qualified archaeologist, would determine the significance of the discovered resources in accordance with **MM-CUL-2** and per PRC 21083.2(i) and State CEQA Guidelines Section 15064.5(f). Significance would be based on the results of evaluative archaeological testing completed by the SOI-qualified archaeologist and applying the criteria for listing in the CRHR, per State CEQA guidelines Section 15064.5(a)(1-4) and identifying unique archaeological resources per Section 21083.2 of the PRC. For cultural resources determined by the District to be a historical resource or a unique archaeological resource, the SOI-qualified archaeologist shall prepare a Research Design and Data Recovery Program (RDDR), which shall mitigate impacts in accordance with **MM-CUL-2** and State CEQA Guidelines Section 15126.4(b)(3) and Section 15064.5(f), and the project proponent would be required to retain an SOI-qualified archaeologist for continuous archaeological monitoring until the completion of ground-disturbing construction activities in the vicinity of the unanticipated discovery.

Level of Significance After Mitigation

Mitigation measure **MM-CUL-2** would reduce impacts on archaeological historical resources or unique archaeological resources (**Impact-CUL-2**) by identifying potentially significant archaeological resources and determining if avoidance through project redesign prior to construction is feasible. In addition, where applicable, it would provide for implementation of an archaeological data recovery program designed to record and remove significant prehistoric or historic period archaeological deposits that would otherwise be destroyed through construction-related ground disturbance. Where applicable, it would provide for archaeological construction monitoring, including Native American monitoring if determined by the District, in areas of archaeological sensitivity to mitigate the potential for project construction to damage or destroy an archaeological historical resource or unique archaeological resource. Finally, it would establish the procedures to follow in the event an unanticipated discovery of an archaeological resource occurs during project construction. These measures would be implemented individually or in combination, as required by **MM-CUL-2**, to reduce impacts. However, because the location, nature, scope and effects of future development proposals are not known at this time, it is not possible to state with certainty that **MM-CUL-2** would avoid or reduce impacts to less than significant. Therefore, **Impact-CUL-2** would be considered significant and unavoidable after mitigation.

Threshold 3: Disturb human remains, including those interred outside of formal cemeteries?**Impact Analysis****Construction**

There are many areas within San Diego County where prehistoric and historic period human remains have been uncovered during both archaeological investigations and grading activities. Therefore, the potential for the unanticipated encounter of human remains during construction activities is possible.

Six of the eight planning districts (PD1, PD2, PD7, PD8, PD9, PD10) have low archaeological sensitivity and, therefore, have a low potential to contain historic or prehistoric period human remains. In addition, there is no planned future development in PD7 that could potentially disturb human remains, including those outside of formal cemeteries. As such, there would be no potential to encounter human remains in PD7. Although it is unlikely that human remains are present in PD1, PD2, PD8, PD9, and PD10, it is not possible to rule out the presence of such resources in those planning districts. Two planning districts contain areas of archaeological sensitivity indicated by previous discoveries and may also have heightened potential for the presence of archaeological human remains. One is the former Tidelands City Dump (P-37-017104/CA-SDI-15118) at the southern portion of PD3. The other is a prehistoric site (P-37-005931/CA-SDI-5931) that consists of a large artifact scatter and Native American burial at least partially located within the 10.29-acre area of high prehistoric sensitivity in PD4. While the Native American burial is not located within PD4, its proximity to the planning district indicates there is a higher potential for additional Native American burials to be located within PD4.

For these reasons, future development associated with PMPU has the potential to disturb human remains, including those interred outside of formal cemeteries within all planning districts in the proposed PMPU area.

Health and Safety Code Section 7050.5 and State CEQA Guidelines Section 15064.5(e) describe the process to be followed in the event human remains are discovered during project implementation. In the event of discovery of human remains during ground-disturbing activities for future development projects, no further disturbance shall occur until the San Diego County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The San Diego County Coroner must be notified of the find immediately. If the remains are determined by the coroner to be Native American, the coroner is responsible for contacting the Native American Heritage Commission (NAHC) within 24 hours. NAHC, pursuant to Section 5097.98, will immediately notify those persons it believes to be the Most Likely Descendent (MLD) of the deceased person so the MLD may inspect the burial site and make recommendations for treatment and/or disposition. The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of the human remains and items associated with Native American burials. Per State CEQA Guidelines Section 15064.5(e)(2), the landowner or landowner's authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance if the NAHC is unable to identify a MLD or if the MLD failed to make a recommendation within 24 hours after being notified by the NAHC; if the descendent

identified fails to make a recommendation; or if the landowner or their authorized representative rejects the recommendation of the descendent and mediation by the NAHC fails to provide measures acceptable to the landowner. Therefore, impacts associated with the disturbance of human remains would be less than significant because all future development allowed under the proposed PMPU would be required to comply with these laws and regulations.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on human remains associated with construction of future development.

Planning District 3 contains areas of archaeological sensitivity indicated by previous discoveries and may also have heightened potential for the presence of archaeological human remains. Construction of a Waterfront Destination Park under Option 1 would involve ground-disturbing activities that have the potential to disturb human remains, including those interred outside of formal cemeteries; however, compliance with the existing regulatory framework, including State CEQA Guidelines Section 15064.5(e), Health and Safety Code Section 7050.5, and PRC Section 5097.98 would ensure that impacts associated with the disturbance of human remains would be less than significant. Therefore, construction under Option 1 would not result in any additional or more severe impacts related to human remains than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on human remains associated with construction of future development.

PD3 contains areas of archaeological sensitivity indicated by previous discoveries and may also have heightened potential for the presence of archaeological human remains. Option 2 would not propose any changes to water or land uses that would result in any development of uses that would be different than those described above. As a result, construction activities would generally be the same as those described above. As such, ground-disturbing construction activities associated with Option 2 could also have the potential to disturb human remains, including those interred outside of formal cemeteries; however, compliance with the existing regulatory framework, including State CEQA Guidelines Section 15064.5(e), Health and Safety Code Section 7050.5, and PRC Section 5097.98 would ensure that impacts associated with the disturbance of human remains would be less than significant. Therefore, construction under Option 2 would not result in any additional or more severe impacts related to human remains than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on human remains associated with construction of future development.

PD3 contains areas of archaeological sensitivity indicated by previous discoveries and may also have heightened potential for the presence of archaeological human remains. Option 3 would not propose any changes to water or land uses that would result in any development of uses that would be different than those described above. As a result, construction activities would generally be the same as those described above. Ground-disturbing construction activities for this option would be required for the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, as well as any new park space. As such, ground-disturbing construction activities associated with Option 3 could also have the potential to disturb human remains, including those interred outside of formal cemeteries; however, compliance with the existing regulatory framework, including State CEQA Guidelines Section 15064.5(e), Health and Safety Code Section 7050.5, and PRC Section 5097.98 would ensure that impacts associated with the disturbance of human remains would be less than significant. Therefore, construction under Option 3 would not result in any additional or more severe impacts related to human remains than buildout of the proposed PMPU without Option 3.

Operation

Only ground-disturbing activities facilitated by the proposed PMPU have the potential to result in impacts on human remains, which are typically associated with construction. However, if operation of future development allowed under the proposed PMPU includes ground disturbances, those operations have the potential to disturb human remains, including those interred outside of formal cemeteries within all planning districts in the proposed PMPU area. In the event of a discovery of human remains, compliance with State CEQA Guidelines Section 15064.5(e), Health and Safety Code Section 7050.5, and PRC Section 5097.98 would be required. Therefore, impacts associated with the disturbance of human remains would be less than significant because all future development allowed under the proposed PMPU would be required to comply with these existing laws and regulations.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on human remains associated with operation of future development.

Also, as noted, only operational activities involving ground disturbance would have the potential to disturb human remains, including those interred outside of formal cemeteries. Operations under Option 1 would consist of routine maintenance and upkeep of the Waterfront Destination Park, similar to other existing parks on District Tidelands, and therefore would not include any such activities. Therefore, impacts would be less than significant, and operations under Option 1 would not result in any additional or more severe impacts related to human remains than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on human remains associated with operation of future development.

Also, as noted, only operational activities involving ground disturbance would have the potential to disturb human remains, including those interred outside of formal cemeteries. Operations under Option 2 would consist of routine maintenance and upkeep of the expanded Lane Field Setback Park, similar to other existing parks on District Tidelands, and therefore would not include any such activities. Therefore, impacts would be less than significant, and operations under Option 2 would not result in any additional or more severe impacts related to human remains than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on human remains associated with operation of future development.

Also, as noted, only operational activities involving ground disturbance would have the potential to disturb human remains, including those interred outside of formal cemeteries. Operations under Option 3 would consist of routine maintenance and upkeep of the additional park space added under this option, similar to other existing parks on District Tidelands, and therefore would not include any such activities. Therefore, impacts would be less than significant, and operations under Option 3 would not result in any additional or more severe impacts related to human remains than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in the disturbance of human remains. No impacts would occur.

Impact Determination and Mitigation

Although construction activities associated with future development allowed under the proposed PMPU have the potential to disturb human remains, including those interred outside of formal cemeteries, compliance with applicable laws and regulations would avoid or reduce such impacts to a level below significance. Accordingly, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Threshold 4: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

b. a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact Analysis

Future development projects under the proposed PMPU, as projects subject to CEQA, must comply with the requirements of AB 52, including consultation with California Native American tribes (if one or more tribes have requested consultation) as each development project is proposed that may result in the identification of TCRs. As described in Section 4.4.2, *Existing Conditions*, the San Diego area has a long history of Native American occupation, and development activities pursuant to the implementation of the proposed PMPU have the potential to impact TCRs.

As discussed above, based on a records search conducted at the SCIC and a Sacred Lands File Search obtained from the NAHC, no TCRs that are listed in or eligible for listing in the CRHR or Sacred Lands file were identified on or within proximity to the proposed PMPU area. Moreover, no tribes have contacted the District to request notification of projects under AB 52; therefore, tribal consultation was not conducted, and no TCRs were identified as the result of an AB 52 consultation process.

Construction

Much of the proposed PMPU area consists of harbor waters or fill land that has been entirely developed with buildings, paving, or park landscape. As such, due to the nature of the proposed PMPU area, and the absence of recorded TCRs of an archaeological nature within the proposed PMPU area, it is unlikely that tribal cultural resources, as defined in PRC Section 21074, would be encountered during development that occurs under the proposed PMPU.

Impacts on potential TCRs of an archaeological nature would be the same as those described under Threshold 2. Future development allowed under the proposed PMPU has the potential to cause substantial adverse change in the significance of a yet-to-be identified TCR within all planning

districts in the PMPU area during ground-disturbing construction activities; therefore, impacts are considered significant (**Impact-CUL-3**).

If no Native American tribes request consultation on future development projects falling under the proposed PMPU, and the District determines there is an archaeological historic resource or unique archaeological resource, future project proponents would implement **MM-CUL-2**. If one or more Native American tribes requests project notifications and requests consultation on future development projects falling under the proposed PMPU, and the District determines there is a TCR (per subdivision (c) of PRC Section 5024.1) that could be affected by a project based on AB 52 tribal consultation, mitigation measures to avoid or mitigate a significant effect on TCRs would be developed during consultation and would be included in the final environmental document for that project. If the consulting tribe or the District concludes that mutual agreement cannot be reached after making a reasonable, good-faith effort, under AB 52, the lead agency may consider the four mitigation measures described in PRC Section 21084.3(e) (**MM-CUL-3**).

Impacts on Native American human remains that are potential TCRs would be the same as those described under Threshold 3. Health and Safety Code Section 7050.5 and State CEQA Guidelines Section 15064.5(e) describe the process to be followed in the event human remains are discovered during project implementation. In the event of discovery of human remains during ground-disturbing activities for future development projects, no further disturbance would occur until the San Diego County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. Impacts associated with the disturbance of human remains that are potential TCRs would be less than significant because all future development allowed under the proposed PMPU would be required to comply with these laws and regulations.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on TCRs (**Impact-CUL-3**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Much of the proposed PMPU area, including PD3 where Option 1 is located, consists of harbor waters or fill land that has been entirely developed with buildings, paving, or park landscape. As such, it is not anticipated that TCRs, as defined in PRC Section 21074, would be encountered during development associated with Option 1. Even so, future development associated with Option 1 would have the potential to cause a substantial adverse change in the significance of a yet-to-be identified TCR within PD3 during ground-disturbing construction activities, which is considered a significant impact (**Impact-CUL-3**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on TCRs (**Impact-CUL-3**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Much of the proposed PMPU area, including PD3 where Option 2 is located, consists of harbor waters or fill land that has been entirely developed with buildings, paving, or park landscape. As such, it is not anticipated that TCRs, as defined in PRC Section 21074, would be encountered during development associated with Option 2. Even so, future development associated with Option 2 would have the potential to cause a substantial adverse change in the significance of a yet-to-be identified TCR within PD3 during ground-disturbing construction activities, which is considered a significant impact (**Impact-CUL-3**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant construction impacts on TCRs (**Impact-CUL-3**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Much of the proposed PMPU area, including PD3 where Option 3 is located, consists of harbor waters or fill land that has been entirely developed with buildings, paving, or park landscape. As such, it is not anticipated that TCRs, as defined in PRC Section 21074, would be encountered during development associated with Option 3. Even so, future development associated with Option 3 would have the potential to cause a substantial adverse change in the significance of a yet-to-be identified TCR within PD3 during ground-disturbing construction activities, which is considered a significant impact (**Impact-CUL-3**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Operation

Similar to archaeological resources, only ground-disturbing activities associated with construction of future development projects allowable under the proposed PMPU have the potential to cause a substantial adverse change in the significance of a TCR, as defined in PRC Section 21074. Foreseeable operations associated with development of water and land uses are not expected to include ground disturbance, and therefore do not have the potential to cause a substantial adverse change in the significance of a TCR within the proposed PMPU area. Impacts would be less than significant.

Potential impacts on Native American human remains that are potential TCRs would be the same as those described under Threshold 3. As discussed under Threshold 3, impacts associated with the disturbance of human remains that are potential TCRs would be less than significant because all future development allowed under the proposed PMPU would be required to comply with these laws and regulations.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction and operation of a Waterfront Destination Park. The implementation of this option would result in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As discussed above, the District anticipates that implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on TCRs associated with operation of future development.

Also, as noted, only operational activities involving ground disturbance have the potential to cause a substantial adverse change in the significance of a TCR. Operations under Option 1 would consist of routine maintenance and upkeep of the Waterfront Destination Park, similar to other existing parks on District Tidelands, and therefore would not include any such activities. Therefore, impacts would be less than significant, and operations under Option 1 would not result in any additional or more severe impacts related to TCRs than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreation Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As discussed above, the District anticipates that implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on TCRs associated with operation of future development.

Also, as noted, only operational activities involving ground disturbance have the potential to cause a substantial adverse change in the significance of a TCR. Operations under Option 2 would consist of routine maintenance and upkeep of the expanded Lane Field Setback Park, similar to other existing parks on District Tidelands, and therefore would not include any such activities. Therefore, impacts would be less than significant, and operations under Option 2 would not result in any additional or more severe impacts related to TCRs than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3.

As discussed above, The District anticipates that implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact on TCRs associated with operation of future development.

Also, as noted, only operational activities involving ground disturbance have the potential to cause a substantial adverse change in the significance of a TCR. Operations under Option 3 would consist of routine maintenance and upkeep of the additional park space added under this option, similar to other existing parks on District Tidelands, and therefore would not include any such activities. Therefore, impacts would be less than significant, and operations under Option 3 would not result in any additional or more severe impacts related to TCRs than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in a substantial adverse change in the significance of a TCR as defined by PRC Section 21074. WLU Policy 2.3.1 involves supporting the placement of interpretive signage and artifacts, which would not result in adverse physical impacts, but could be beneficial to the treatment of such resources should they occur. This policy is also consistent with **MM-CUL-2** where treatment may be required in the event that impacts occur.

Impact Determination and Mitigation

Ground-disturbing activities associated with construction of future development projects allowable under the proposed PMPU have the potential to cause a substantial adverse change in the significance of a potential a tribal cultural resource, as defined in PRC Section 21074.

Significant Impacts

Impact-CUL-3: Future Ground-Disturbing Activities Within the Proposed PMPU Area May Adversely Impact Tribal Cultural Resources. Ground-disturbing activities associated with future development allowed under the proposed PMPU would have the potential to cause a substantial adverse change in the significance of a TCR, as defined in PRC Section 21074, which would be considered a significant impact.

Mitigation Measures

For **Impact-CUL-3**, the following mitigation measures shall be implemented:

Implement **MM-CUL-2: Conduct an Archaeological Resource Assessment**, as described under Threshold 2 above.

MM-CUL-3: Require Standard Mitigation Measures for Impacts on TCRs. If AB 52 tribal consultation occurs for a future development project under the proposed PMPU and a tribe and the District cannot come to an agreement on mitigation measures, PRC Section 21084.3 lists examples of standard mitigation measures that the District may require, when feasible, to mitigate impacts on TCRs:

1. Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space to incorporate the resources with culturally appropriate protection and management criteria.
2. Treating the resource with culturally appropriate dignity and taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - a. Protecting the cultural character and integrity of the resource.
 - b. Protecting the traditional use of the resource.
 - c. Protecting the confidentiality of the resource.
3. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.
4. Protecting the resource.

Level of Significance After Mitigation

Mitigation measure **MM-CUL-2** would reduce impacts on potential archaeological TCRs (**Impact-CUL-3**) by identifying potential TCRs, as defined in PRC Section 21074, and determining if avoidance through project redesign prior to construction is feasible. In addition, where applicable, it would provide for implementation of an archaeological data recovery program designed to record and remove significant prehistoric or historic period archaeological deposits that would otherwise be destroyed through construction-related ground disturbance. Where applicable, it would provide for archaeological construction monitoring, including Native American monitoring if determined by the District, in areas of archaeological sensitivity to mitigate the potential for project construction to damage or destroy TCRs. Finally, it would establish the procedures to follow in the event an unanticipated discovery of an archaeological resource occurs during project construction. These

measures would be implemented individually or in combination, as required by **MM-CUL-2**, to reduce impacts. Mitigation measure **MM-CUL-3** would reduce impacts through the consideration of mitigation measures for TCRs in the absence of consensus on mitigation resulting from tribal consultation. However, because the location, nature, scope, and effects of future development proposals are not known at this time, it is not possible to state with certainty that **MM-CUL-2** and **MM-CUL-3** would avoid or reduce impacts to less than significant. Therefore, **Impact-CUL-3** would be considered significant and unavoidable after mitigation.

4.4.5 Cumulative Impact Analysis

A significant cumulative impact on cultural resources would result if, when considered within the context of past, present, and probable future projects, the future, site-specific projects were to: (1) cause or contribute to impacts that would result in a substantial adverse change in the significance of a historical or archaeological resource; or (2) disturb any human remains.

4.4.5.1 Geographic Scope

The geographic scope for cumulative impacts associated with cultural resources and TCRs consists of areas that could be affected by the implementation of water and land use designations, PMPU policies, as well as areas affected by the implementation of other projects that include activities that could be directly or indirectly affect cultural resources and TCRs on the project site. In general, land use plans that would guide development within 1 mile of the proposed PMPU area were considered in this analysis to account for the prehistoric, ethnographic, and historic period landscape, of which cultural resources and TCRs are a part. One mile is sufficient to account for prehistoric and ethnographic bayfront-specific land uses as well as historic period waterfront-specific land uses. Projects on land that have the potential to modify and/or demolish structures potentially eligible for the CRHR have the potential to contribute to cumulative impacts on historical architectural resources. Projects involving ground disturbance of natural sediments or anthropogenic fill have the potential to contribute to cumulative impacts on archaeological resources, TCRs, or human remains.

4.4.5.2 Cumulative Effects From Past, Present, and Probable Future Projects

Table 2-2 in Chapter 2, *Environmental Setting*, includes past, present, and future plans and programs in the vicinity of the proposed PMPU area. Three plans and programs—the National City Bayfront Projects and Plan Amendments, the Chula Vista Bayfront Master Plan, and the Wetlands Mitigation Bank at Pond 20—are located within the District’s jurisdiction and are within 0.25 mile of the proposed PMPU area. The other projects in Table 2-2 are plans either approved or in preparation in adjacent jurisdictions. Features of several of these plans may be within 1 mile of the proposed PMPU area. Present and probable future projects within the cumulative study area could encounter historical resources, unique archaeological resources, TCRs, and human remains during construction activities. However, cultural resources and TCRs would be identified, evaluated and treated according to Federal, State, and local regulations during project development. For projects having the potential to significantly impact NRHP or CRHR cultural resources, mitigation measures carried out prior to and during construction would be required to reduce potential impacts. These projects, like the future, site-specific projects, are required to comply with all Federal, State, and

local policies regarding cultural resources and TCRs, as described in Section 4.4.3, which would reduce potential loss of cultural resources and TCRs. Furthermore, National City General Plan Policy OS-8.8 requires cultural resource monitoring for all projects during ground-disturbing activities.

While individual projects mitigate the loss of historical resources through avoidance, preservation in place, archival documentation, salvage, interpretive programs, or alteration in accordance with SOI standards, the cumulative effect is a continued decrease in the number and variety of historical resources in the region. Therefore, the potential effect of cumulative projects on historical resources would be cumulatively significant.

For archaeological resources and TCRs, previous historical urban development without proper professional assessment and systematic collection of data, prior to the enactment of Federal, State, and local laws and regulations, has resulted in the loss of potentially significant scientific and cultural data. More recent development has been carried out under Federal, State, and local regulations, with mitigation of significant impacts on such resources. However, because archaeological resources, including archaeological historical resources and unique archaeological resources, and TCRs are non-renewable resources, the direct and indirect impacts of past, present, and future projects are cumulatively significant.

For human remains, existing laws and regulations—such as State CEQA Guidelines Section 15064.5, Health and Safety Code Section 7050.5, and PRC 5097.98—require past and present projects to treat human remains in a manner consistent with the proper protocol and treatments to minimize the disturbance of human remains and to appropriately treat any remains that are discovered. Probable future projects would be required to comply with these regulations. Implementation of these protocols and treatments would reduce the impacts of inadvertent discoveries of human remains to a less-than-significant level. Therefore, the potential effect of cumulative projects on human remains, would be cumulatively less than significant.

4.4.5.3 Project Contribution

Historical Resources

As discussed under Threshold 1, PD2, PD3, PD4, and PD10 contain historical resources that are listed or eligible for listing in a Federal, State, or local register. All of the planning districts contain built resources that will reach the 50-year age benchmark for consideration as potential historical resources under CEQA by 2050 (i.e., the proposed PMPU planning horizon). Therefore, construction associated with future projects allowed under the proposed PMPU could damage, alter, or demolish historical resources. Impacts might include, but are not limited to, demolition or material alteration of known historical structures; structural reuse requiring rehabilitation, restoration, reconstruction, and/or additions; or new construction or in-fill that has the potential to change the local landscape by modifying the setting of nearby historical resources. Potential impacts might also be associated with changes to previously unevaluated historical resources or resources that would achieve significance by 2050. These types of impacts would result in a substantial adverse change in the significance of a historical resource. Therefore, future development projects allowed under the proposed PMPU would have the potential to result in a cumulatively considerable contribution to a significant cumulative impact on historical resources (**Impact-C-CUL-1**). Consequently, the proposed PMPU's contribution is considered cumulatively considerable/significant.

The District anticipates that future development allowed under the proposed PMPU would not result in any operations-related impacts on historical resources within the proposed PMPU area because ground disturbances or structural modifications, or vibration impacts are not expected to be significant during operations associated with the future development projects.

Mitigation measure **MM-CUL-1** would be implemented, as applicable, for future site-specific projects under the proposed PMPU. If such projects are required to avoid the historical resource or to conform to the SOI Standards and involve the relocation, conversion, rehabilitation, or alteration of a historical resource, or alterations to the immediate surroundings of a historical resource, then any impact on historical resources would be mitigated to less than significant. With implementation of **MM-CUL-1**, in many cases, future projects under the proposed PMPU would not result in significant impacts on historical resources. For future projects that necessarily alter a historical resource directly or indirectly so as to impair its ability to convey historical significance, or for future projects that necessarily entail demolition of a historical resource, **MM-CUL-1** would not reduce impacts to a less-than-significant level. As such, the potential exists for future development to result in cumulatively considerable historical resource impacts, when added to significant cumulative impacts from other past, present, and probable future site-specific projects (**Impact-C-CUL-1**).

Archaeological Resources

As discussed in Threshold 2, potential impacts from future ground-disturbing activities associated with landward portions of future, development would depend on whether such activities occur within artificial fill materials (low likelihood of impact) or intact soil deposits (higher likelihood of impact). If site-specific and future project-related construction or operation activities damaged or destroyed intact archaeological resources that may be eligible for the NRHP or CRHR, or resources meeting the definition of a unique archaeological resource under PRC 21083.2 and State CEQA Guidelines Sections 15064.5© and 15126.4(b)(3), this would result in significant impacts. Future, site-specific projects built or operated on artificial fill material on the landward and seaward portions of the proposed project site are less likely to impact a significant archaeological resource or unique archaeological resource because fill materials have little likelihood of containing intact archaeological deposits. Thus, construction and ground-disturbing operations associated with future development allowed under the proposed PMPU would have the potential to make a cumulatively considerable contribution to a significant cumulative impact on archaeological resources (**Impact-C-CUL-2**). Therefore, the proposed PMPU's contribution is considered cumulatively considerable/significant.

Because the proposed PMPU area has recorded archaeological sites that have not been assessed for CRHR eligibility, or for unique archaeological resource status, and the potential to contain unknown buried or otherwise obscured archaeological resources, mitigation is required for future site-specific construction and operation activities. Mitigation measure **MM-CUL-2** would be implemented for future projects developed under the proposed PMPU. Implementation of **MM-CUL-2** would help to avoid contributing to the loss or alteration of archaeological historical resources and unique archaeological resources. However, because the location, nature, scope, and effects of future development proposals are not known at this time, it is not possible to state with certainty that **MM-CUL-2** would avoid or reduce cumulative impacts to less than significant. As such, the potential exists for future development to result in cumulatively considerable impacts on archaeological historical resources and unique archaeological resources, when combined with significant

cumulative impacts from other past, present, and probable future site-specific projects (**Impact-C-CUL-2**).

Human Remains, Including those Outside of Formal Cemeteries

As discussed under Threshold 3, there are many areas within San Diego County where prehistoric and historic period human remains have been uncovered during both archaeological investigations and construction-related ground-disturbing activities. However, as discussed above, for site-specific and future project-related construction or operation activities resulting in the discovery of human remains, construction activities would have to comply with existing laws. Health and Safety Code Section 7050.5 states that in the event of discovery of human remains during ground disturbances, no further disturbance shall occur until the San Diego County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The San Diego County Coroner must be notified of the find immediately, and if the Coroner determines the remains are Native American, notification to the NAHC and coordination with the designated Most Likely Descendant shall occur. In addition, per State CEQA Guidelines Section 15064.5(e)(2), the landowner or landowner's authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance if the NAHC is unable to identify a MLD or if the MLD failed to make a recommendation within 24 hours after being notified by the NAHC; if the descendent identified fails to make a recommendation; or if the landowner or their authorized representative rejects the recommendation of the descendent and mediation by the NAHC fails to provide measures acceptable to the landowner. Compliance with these laws would avoid or reduce such impacts to a level below significance. Accordingly, impacts would not be cumulatively considerable and would be less than significant.

Tribal Cultural Resources

TCRs may be found throughout the San Diego region and it is difficult to document TCRs with precise locations. Construction activities associated with trenching and deeper excavations, as opposed to more surficial disturbances, have the potential to uncover or disturb TCRs. Development projects approved under the proposed PMPU would generally involve site disturbance, movement of construction equipment, construction staging areas, and import and export of materials, all of which could result in a substantial adverse change in the significance of a TCR. Therefore, when combined with significant cumulative impacts from other past, present, and probable future site-specific projects, construction and ground-disturbing activities associated with future development allowed under the proposed PMPU would have the potential to make a cumulatively considerable contribution to a significant cumulative impact on TCRs (**Impact-C-CUL-3**). Although implementation of mitigation measures (**MM-CUL-2** and **MM-CUL-3**) would help reduce the impacts, because the location, nature, scope, and effects of future development proposals are not known at this time, it is not possible to state with certainty that **MM-CUL-2** and **MM-CUL-3** would avoid or reduce cumulative impacts to less than significant. Therefore, the proposed PMPU's contribution to cumulative TCR impacts would be cumulatively considerable and unavoidable after mitigation.

4.4.5.4 Cumulative Impact Determination and Mitigation

Cumulative impacts on historical built environment resources (**Impact-C-CUL-1**) may still remain significant and unavoidable after mitigation (**MM-CUL-1**). This potential loss or alteration of historical built environmental resources, in combination with the progressive cumulative loss or alteration of historical built environment resources associated with other past, present, and probable future projects, would mean the cumulatively considerable contribution of probable future development projects, consistent with the proposed PMPU, to the loss or alteration of historical built environment resources would be significant and unavoidable.

Cumulative impacts on archaeological resources and TCRs (**Impact-C-CUL-2** and **Impact-C-CUL-3**, respectively) may still remain significant and unavoidable after mitigation (**MM-CUL-2** and **MM-CUL-3**, respectively). This potential loss or alteration of archaeological resources and TCRs, in combination with the progressive cumulative loss or alteration of archaeological resources and TCRs associated with other past, present, and probable future projects, would mean the cumulatively considerable contribution of probable future development projects, consistent with the proposed PMPU, to the loss or alteration of archaeological resources and TCRs would be significant and unavoidable.

Adherence to the specific procedures described in State CEQA Guidelines Section 15064.5(e), of Health and Safety Code Section 7050.5 and PRC Section 5097.98 would ensure that future development allowed under the proposed PMPU would not result in a cumulatively considerable contribution to a significant cumulative impact on human remains, including those interred outside of formal cemeteries. No mitigation is required.

4.5.1 Overview

This section describes the existing conditions and laws and regulations for geology and soils, followed by an analysis related to the proposed Port Master Plan Update’s (PMPU’s) potential to: (1) expose people or structures to geologic hazards, (2) result in substantial soil erosion or loss of topsoil, (3) be located on unstable ground, (4) be located on expansive soil, and (5) destroy a unique paleontological resource or site or unique geologic feature. Other potential geology and soils issues, such as impacts related to landslides and soils incapable of supporting wastewater disposal systems, were analyzed in Section VI of the Initial Study/Environmental Checklist (see Appendix A) and determined to have no impact. The analysis and conclusions regarding these impacts are also summarized in Chapter 5, Section 5.4, *Effects Found Not to Be Significant*.

Information in this section is based on the *EIR Level Geology and Soils Evaluation for the Integrated Planning Port Master Plan Update* prepared by Ninyo & Moore, dated June 2017 (Appendix F). Unless cited otherwise, all technical information in this section is based on Appendix F. For the paleontological resources analysis, the technical information is based on records searches conducted by the San Diego Natural History Museum on May 1, 2017 (San Diego Natural History Museum 2017) for the proposed PMPU area.

Table 4.5-1 summarizes the significant impacts and mitigation measures (MMs) discussed in Section 4.5.4.3, *Project Impacts and Mitigation Measures*.

Table 4.5-1. Summary of Significant Geology and Soils Impacts and Mitigation Measures

Summary of Potentially Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-GEO-1: Future Construction Activities within PD1, PD3, PD8, PD9, and PD10 May Adversely Impact Unique Paleontological Resources	PD1, PD3, PD8, PD9, PD10	MM-GEO-1: Require Paleontological Sensitivity Screening and Monitoring in Areas of Sensitivity	Less than Significant	MM-GEO-1 would reduce the potential for future development in the proposed PMPU area to result in destruction of a paleontological resource.
Impact-C-GEO-1: Future Construction Activities Within PD1, PD3, PD8, PD9, and PD10, Combined with Probable Future Projects, May	PD1, PD3, PD8, PD9, PD10	MM-GEO-1 , as described above	Less than Cumulatively Considerable	MM-GEO-1 would reduce the potential for future development in the proposed PMPU area to result in destruction of a

Summary of Potentially Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Cumulatively Impact Unique Paleontological Resources				paleontological resource.

4.5.2 Existing Conditions

The following section describes the existing geologic conditions and related hazards within the proposed PMPU area. This section is introduced by first describing the proposed PMPU area geology followed by groundwater characteristics, faulting, and area seismicity.

4.5.2.1 Geologic Setting

Regional Geology

The PMPU area is situated in the coastal foothill section of the Peninsular Ranges Geomorphic Province. The province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California. The province varies in width from approximately 30 to 100 miles. In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the southern California batholith.

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest. Several of these faults are considered active. The Rose Canyon, Elsinore, San Jacinto, and San Andreas faults are active fault systems located northeast of the proposed PMPU area; the Coronado Bank, San Diego Trough, and San Clemente faults are active faults located west of the proposed PMPU area. Major tectonic activity associated with these and other faults within the regional tectonic framework consists primarily of right-lateral, strike-slip movement. Specifics of faulting are discussed in further detail below.

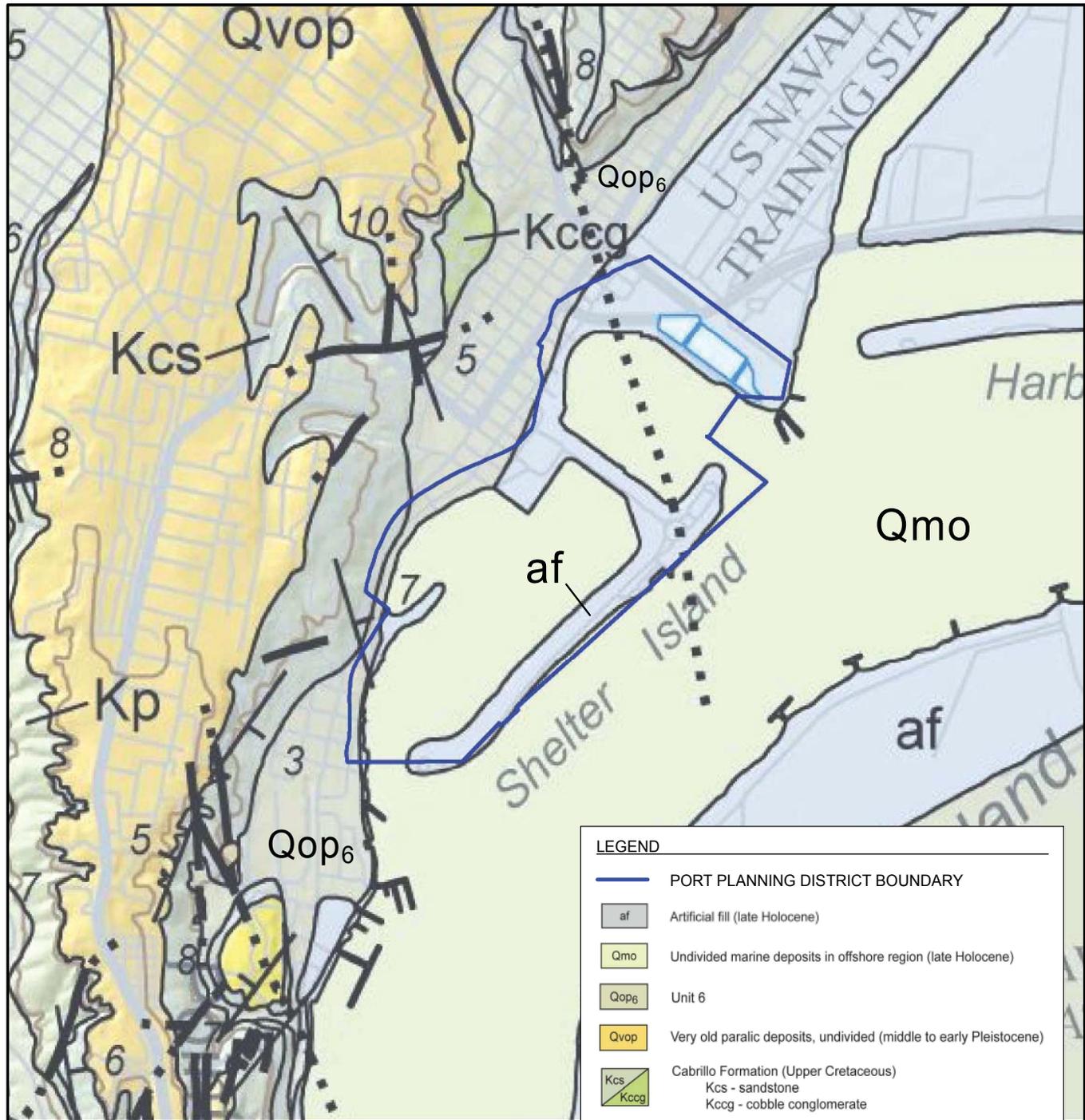
PMPU Area Geology

Recently published geologic maps for the proposed PMPU area include the San Diego 30' x 60' Quadrangle. As shown on Figures 4.5-1 through 4.5-8, near-surface geology in the proposed PMPU area includes artificial fill, marine beach deposits, undivided marine deposits in offshore region, young alluvial floodplain deposits, old paralic deposits, and materials of the Cabrillo Formation (Appendix F). Descriptions of each of these geologic units are presented below. Table 4.5-2 identifies the geologic units underlying each of the planning districts (PDs).

- Qaf: Artificial fill (late Holocene) may range in depth from a few feet to on the order of 20 feet in depth throughout the proposed PMPU area. Artificial fill generally consists of fill deposits from human construction, mining, or quarrying activities and includes compacted engineered and non-compacted non-engineered fill (CGS 2008). Fill soils within the proposed PMPU area are anticipated to have been derived from onsite materials and generally consist of silty sand, clayey sand, and sandy clay.

- Qmb: Marine beach deposits (late Holocene) are unconsolidated beach deposits (CGS 2008) that generally consist of loose to medium dense sand and silt.
- Qmo: Undivided marine deposits in offshore region (late Holocene) are unconsolidated, often ponded marine sediments (CGS 2008) that generally consist of loose to medium dense sand and silt deposited below the water table.
- Qya: Young alluvial floodplain deposits (Holocene and late Pleistocene) are poorly consolidated, poorly sorted, permeable floodplain deposits (CGS 2008) that generally consist of loose to medium dense, clay silt, sand and gravel.
- Qop: Old paralic deposits (late to middle Pleistocene) are poorly sorted, moderately permeable, interfingering strandline, beach, and estuarine colluvial deposits (CGS 2008) that generally consist of stiff to hard, silt and clay, and medium dense to very dense clay, silt, and sand.
- Kcs: Cabrillo Formation, sandstone member (Upper Cretaceous) generally consists of weakly to strongly cemented, interbedded sandstone, siltstone, and gravel and cobble conglomerate. The Cabrillo Formation conformably overlies massive sandstone and siltstone of the Point Loma Formation (CGS 2008).

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SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY



LEGEND

- PORT PLANNING DISTRICT BOUNDARY
- af Artificial fill (late Holocene)
- Qmo Undivided marine deposits in offshore region (late Holocene)
- Qop₆ Unit 6
- Qvop Very old paralic deposits, undivided (middle to early Pleistocene)
- Kcs Cabrillo Formation (Upper Cretaceous)
Kcs - sandstone
Kccg - cobble conglomerate
- Kp Point Loma Formation (Upper Cretaceous)

Contact - Contact between geologic units; dotted where concealed.

Fault - Solid where accurately located; dashed where approximately located; dotted where concealed. U = upthrown block, D = downthrown block. Arrow and number indicate direction and angle of dip of fault plane.

Strike and dip of beds
 Inclined

Landslide - Arrows indicate principal direction of movement. Queried where existence is questionable.

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE



**Figure 4.5-1
Geology Planning District 1 - Shelter Island
Port Master Plan Update EIR**

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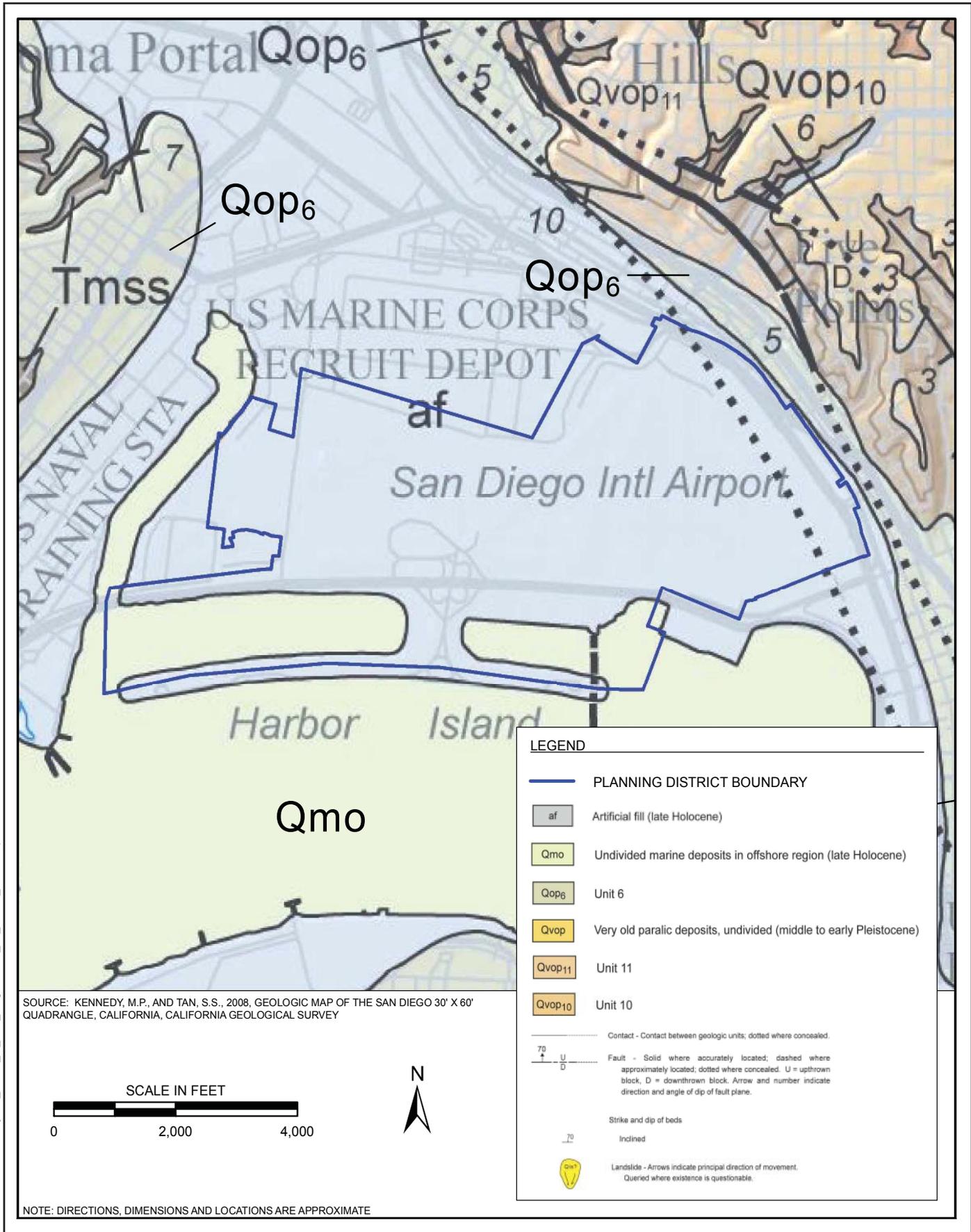


Figure 4.5-2
Geology Planning District 2 - Harbor Island
Port Master Plan Update EIR

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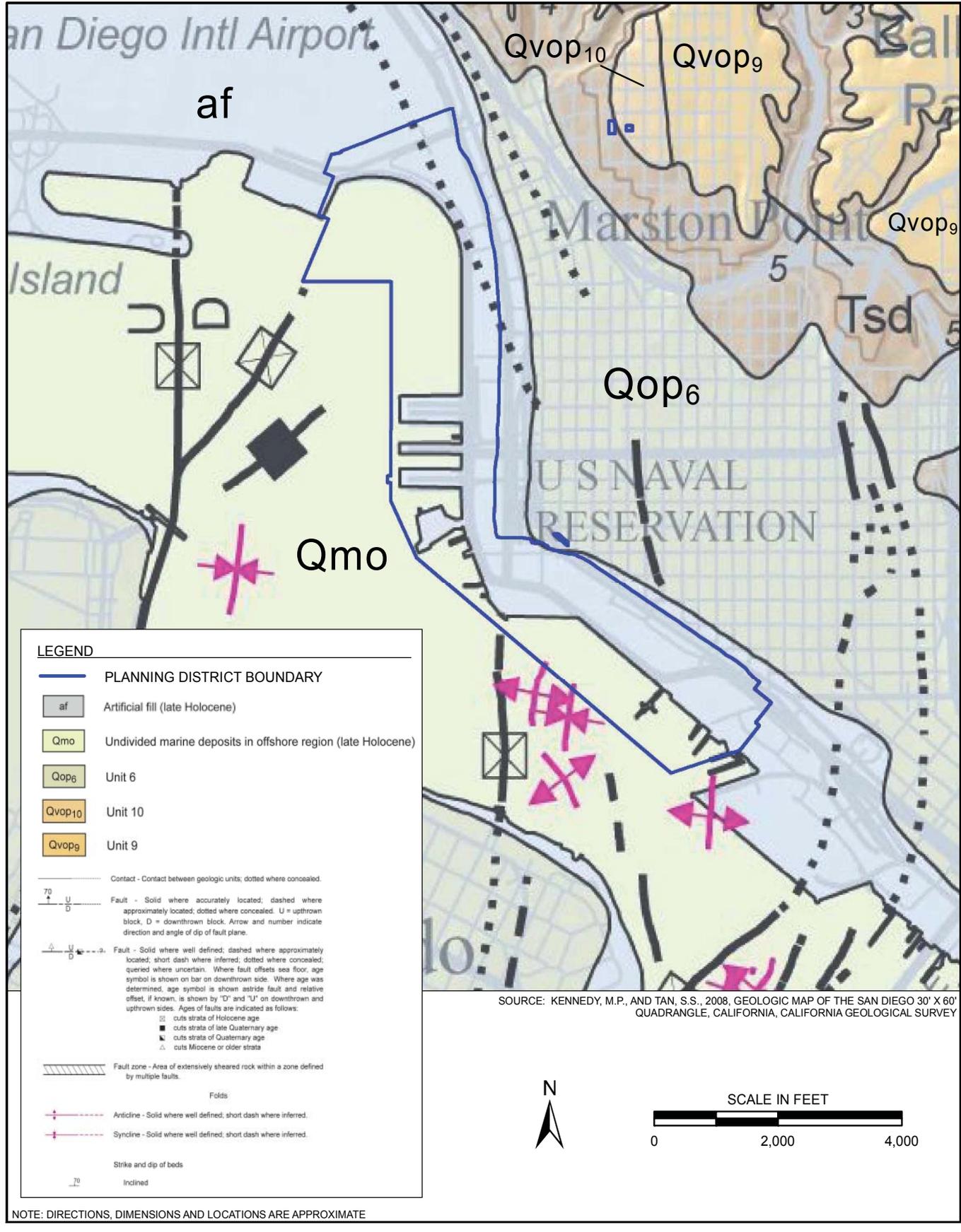


Figure 4-5-3
Geology Planning District 3 - Embarcadero
Port Master Plan Update EIR



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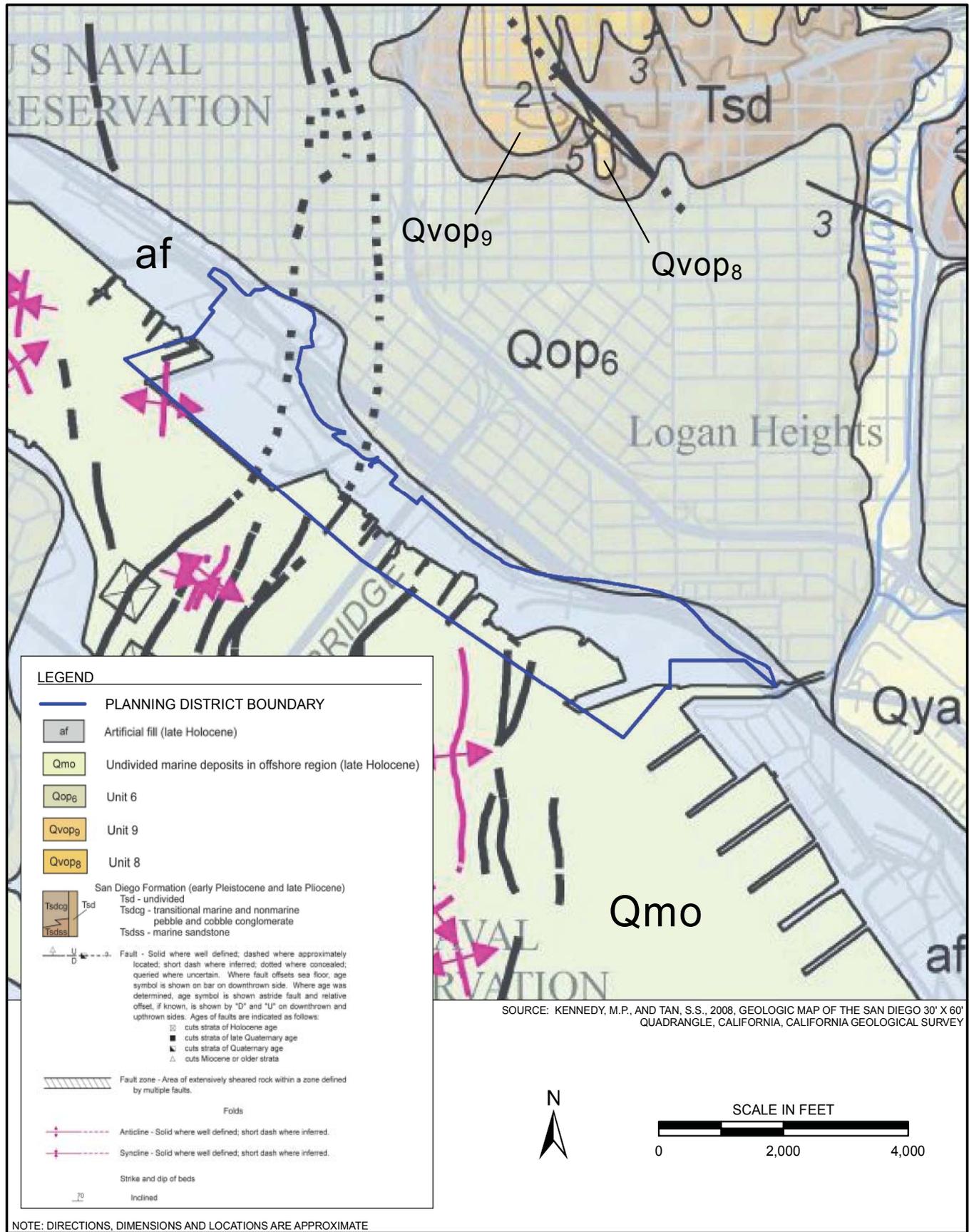


Figure 4.5-4
Geology Planning District 4 - Working Waterfront
Port Master Plan Update EIR



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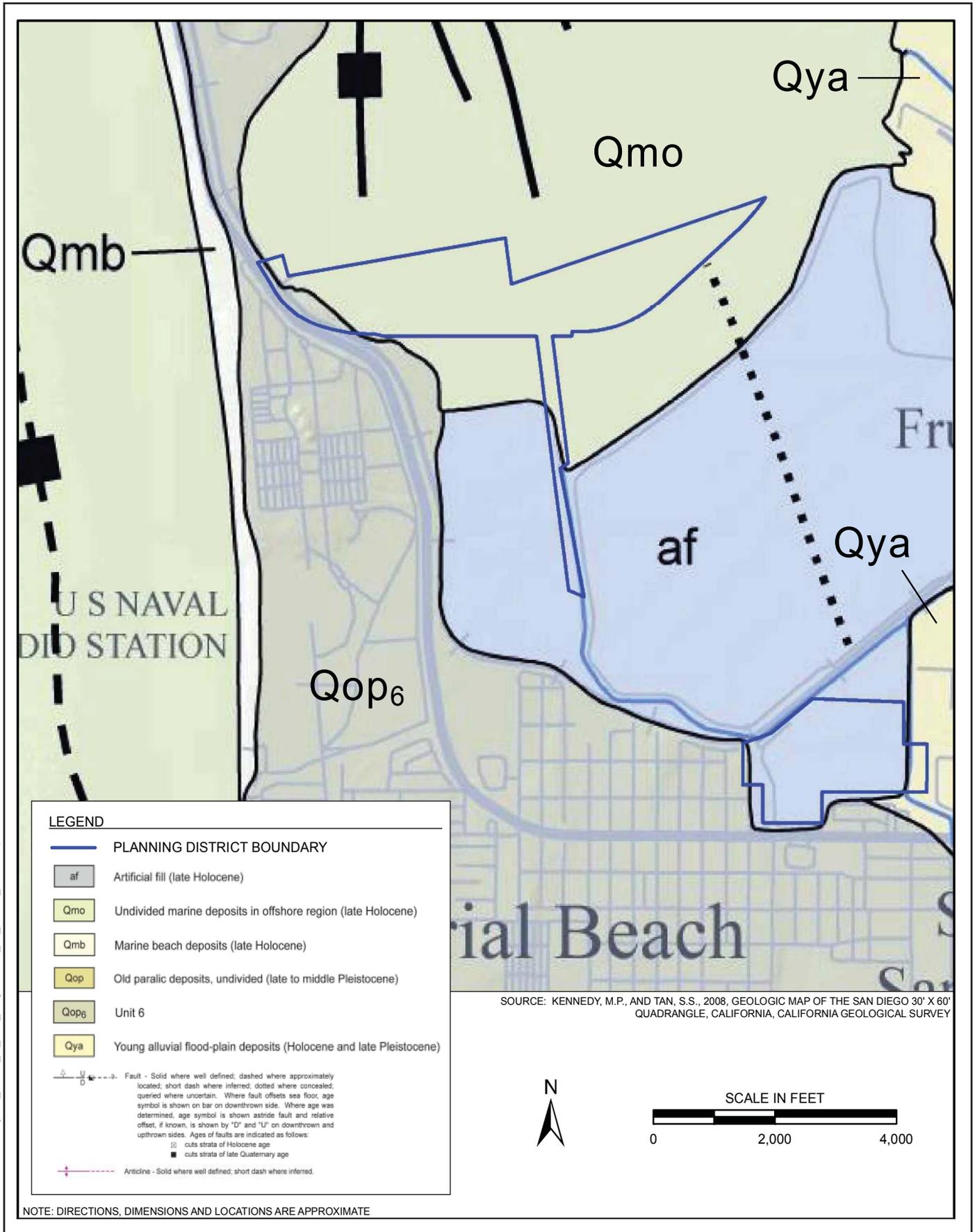


Figure 4.5-5
Geology Planning District 7 - South Bay
Port Master Plan Update EIR

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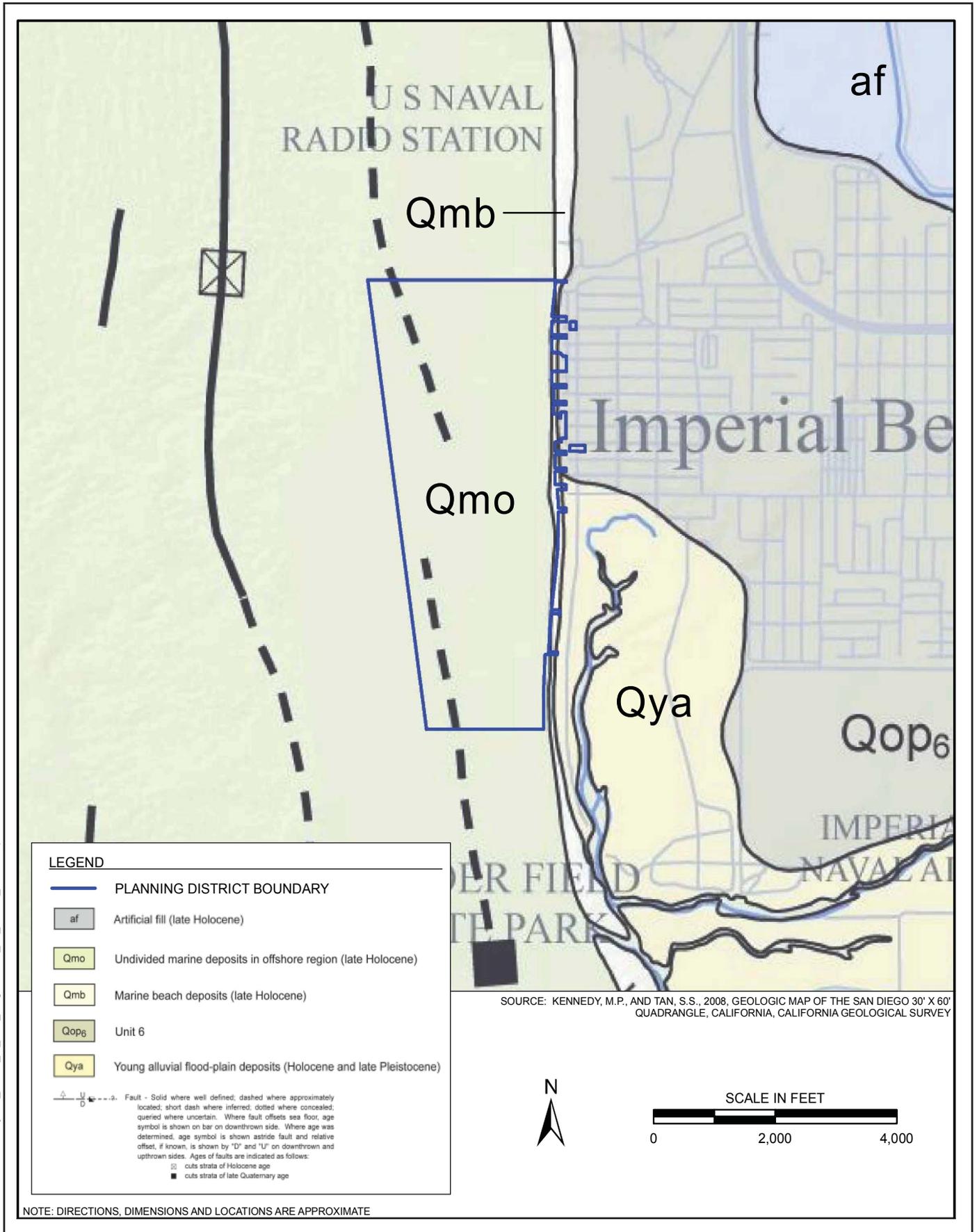


Figure 4.5-6
Geology Planning District 8 - Imperial Beach
Port Master Plan Update EIR



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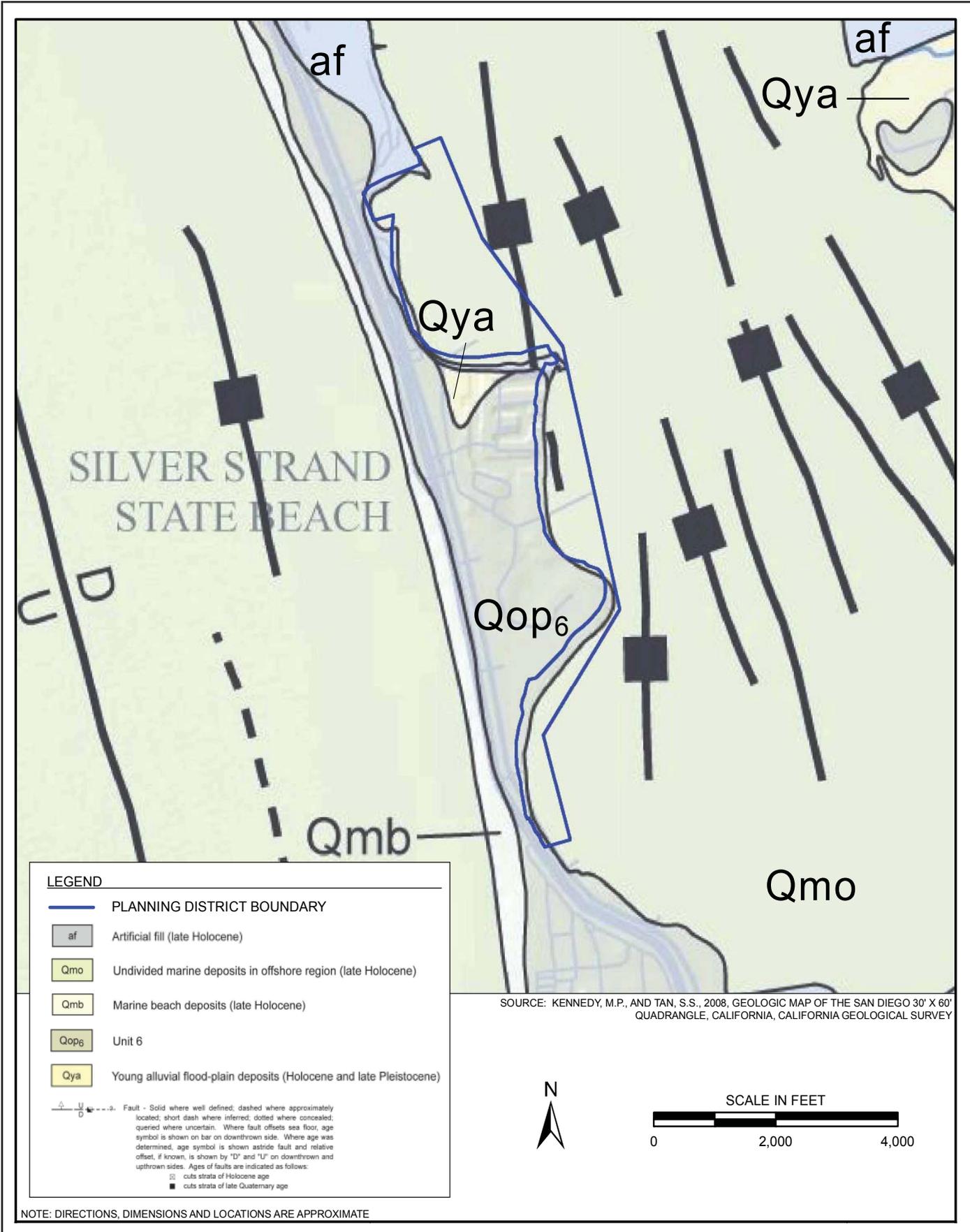
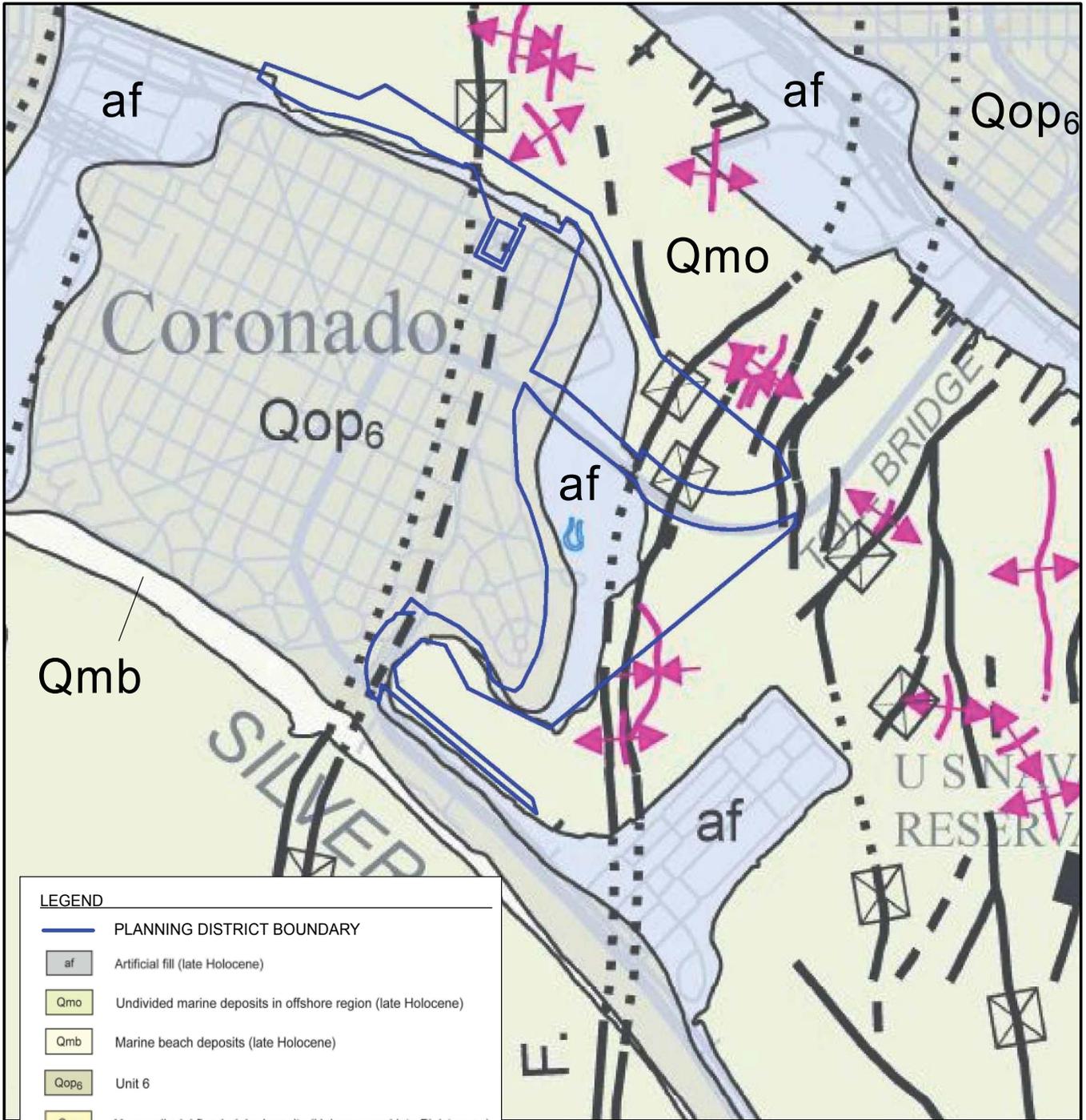


Figure 4.5-7
Geology Planning District 9 - Silver Strand
Port Master Plan Update EIR





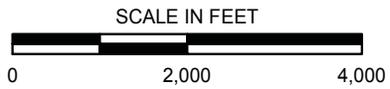
LEGEND

- PLANNING DISTRICT BOUNDARY
- af Artificial fill (late Holocene)
- Qmo Undivided marine deposits in offshore region (late Holocene)
- Qmb Marine beach deposits (late Holocene)
- Qop6 Unit 6
- Qya Young alluvial flood-plain deposits (Holocene and late Pleistocene)

Fault - Solid where well defined, dashed where approximately located; short dash where inferred; dotted where concealed; queried where uncertain. Where fault offsets sea floor, age symbol is shown on bar on downthrown side. Where age was determined, age symbol is shown astride fault and relative offset, if known, is shown by "D" and "U" on downthrown and upthrown sides. Ages of faults are indicated as follows:
 cuts strata of Holocene age
 cuts strata of late Quaternary age

Anticline - Solid where well defined; short dash where inferred.
 Syncline - Solid where well defined; short dash where inferred.

SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE



Figure 4.5-8
Geology Planning District 10 - Coronado Bayfront
Port Master Plan Update EIR

Table 4.5-2. Planning District Geologic Setting

Planning District	Planning District Name	Geologic Units Present
PD1	Shelter Island	Qaf (artificial fill) Qmb (marine beach deposits) Qmo (undivided marine deposits) Qop (old paralic deposits) Kcs (Cabrillo Formation)
PD2	Harbor Island	Qaf (artificial fill) Qmb (marine beach deposits) Qmo (undivided marine deposits)
PD3	Embarcadero	Qaf (artificial fill) Qmb (marine beach deposits) Qmo (undivided marine deposits) Qop (old paralic deposits)
PD4	Working Waterfront	Qaf (artificial fill) Qmo (undivided marine deposits) Qop (old paralic deposits)
PD7	South Bay	Qaf (artificial fill) Qmb (marine beach deposits) Qmo (undivided marine deposits) Qya (young alluvial floodplain deposits) Qop (old paralic deposits)
PD8	Imperial Beach Oceanfront	Qmb (marine beach deposits) Qmo (undivided marine deposits) Qya (young alluvial floodplain deposits) Qop (old paralic deposits)
PD9	Silver Strand	Qaf (artificial fill) Qmb (marine beach deposits) Qmo (undivided marine deposits) Qya (young alluvial floodplain deposits) Qop (old paralic deposits)
PD10	Coronado Bayfront	Qaf (artificial fill) Qmb (marine beach deposits) Qmo (undivided marine deposits in offshore region) Qop (old paralic deposits)

Source: Appendix F.

Note: PD5, National City Bayfront, and PD6, Chula Vista Bayfront, are not part of the proposed PMPU.

4.5.2.2 Geologic Hazards

Faulting and Seismicity

The PMPU area contains several faults. The geologic hazards for each planning district, including the approximate locations of fault strands, are shown on Figures 4.5-9 through 4.5-15. The Rose Canyon Fault Zone is the closest major fault system to the proposed PMPU area and is the onshore portion of

a more extensive fault zone that includes the Offshore Zone of Deformation and the Newport-Inglewood fault to the north, and several possible extensions southward, both onshore and offshore. Portions of this fault zone have been designated by the State of California as Earthquake Fault Zones pursuant to the Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo).

The Rose Canyon Fault Zone consists of predominantly right-lateral strike-slip faults that extend south-southeast through the San Diego metropolitan area. Various fault strands display strike-slip, normal, oblique, or reverse components of displacement. The fault zone extends offshore at La Jolla and continues north-northwest subparallel to the coastline. South of downtown San Diego, the fault zone splits into several splays that underlie San Diego Bay west of the proposed PMPU area, Coronado, and the ocean floor south of Coronado. According to the California Geological Survey Earthquake Fault Zone Map for the Point Loma Quadrangle (2003), active fault segments associated with the Rose Canyon Fault Zone are mapped within PDs2, PD4, and PD10.

As shown on Figure 4.5-11, a strand of the northwest to southeast-trending Point Loma Fault Zone has been mapped in the western portion of the proposed PMPU area and an unnamed segment intersects PD1. The Point Loma Fault Zone is mapped as being buried and is considered potentially active (i.e., a fault that exhibits evidence of ground displacement in the last 2,000,000 years).

In addition, the La Nacion Fault Zone has been mapped approximately 2 miles to the east of the proposed PMPU area, and consists of a series of parallel to subparallel, west dipping normal faults. As defined by the City of San Diego Seismic Safety Study (2008), the La Nacion Fault Zone is considered "Potentially active, Inactive, Presumed Inactive, or Activity Unknown." The PMPU area is located within an Alquist-Priolo Fault Zone and the Downtown Special Fault Zone. Furthermore, a fault was recently discovered within PD3 that transects the existing Seaport Village during a geotechnical investigation completed for a proposed redevelopment of the site.

As such, there is potential for ground rupture due to faulting in the proposed PMPU area. Other hazards associated with seismic activity include strong ground motion, liquefaction, lateral spreading, and seismically induced settlement. These hazards are discussed in more detail, below.

Seismically Induced Ground Motion

Seismically induced ground motion is the ground shaking that occurs during an earthquake. Because the proposed PMPU area is located in a seismically active region, the entire PMPU area is susceptible to strong ground motion. A detailed discussion of the peak ground acceleration analysis completed for each of the planning districts is included in Appendix F.

Liquefaction and Seismically Induced Settlement

Seismically induced soil liquefaction can be described as a significant loss of strength and stiffness due to cyclic pore water pressure generation from seismic shaking or other large cyclic loading. Liquefaction typically occurs when (1) a site is located in a zone with seismic activity, (2) onsite soils are cohesionless, (3) groundwater is encountered within 50 feet of the surface, and (4) soils' relative densities are less than about 70 percent. If these four criteria are met, a seismic event could result in a rapid pore-water pressure increase from the earthquake-generated ground accelerations. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to rapid rise in pore water pressure, and it eventually causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below grade. Factors known to influence liquefaction potential include

composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking. Adverse impacts associated with liquefaction include lateral spreading, ground rupture and/or sand boils, and settlement of the liquefiable layers. Seismically induced settlement is settlement that may occur whether or not the potential for liquefaction exists.

Based on the granular nature of the subsurface materials, the shallow depth to groundwater, and proximity to San Diego Bay and the Pacific Ocean, the entire PMPU area has a high potential for liquefaction and seismically induced settlement (Appendix F).

Lateral Spreading

Lateral spread of the ground surface during an earthquake usually takes place along weak shear zones that have formed within a liquefiable soil layer. Lateral spread has generally been observed to take place in the direction of a free-face (i.e., retaining wall, slope, channel, etc.) but has also been observed to a lesser extent on ground surfaces with very gentle slopes. For sites located in proximity to a free-face, the amount of lateral ground displacement is correlated with the distance of the site from the free-face. Other factors such as earthquake magnitude, distance from the causative fault, thickness of the liquefiable layers, and the fine content and particle sizes of the liquefiable layers also influence the amount of lateral ground displacement. Because lateral spreading is a secondary seismic effect of liquefaction, and the proposed PMPU area has a high potential for liquefaction, there is a potential for lateral spreading to occur in the proposed PMPU area next to a free-face feature such as, but not limited to, a retaining wall or channel (Appendix F).

Landslides

Based on a review of referenced geologic maps, literature, topographic maps, and stereoscopic aerial photographs, no landslides or indications of deep-seated landsliding were noted underlying the proposed PMPU area. According to the Landslide Hazards maps for the Point Loma, National City, and Imperial Beach Quadrangles (1995), the proposed PMPU area is mapped as being “least susceptible” to landslides (with “most susceptible” being the greatest landslide risk). Additionally, landslides are not anticipated to be a concern based on the relatively flat topography of the proposed PMPU area (Appendix F).

4.5.2.3 Planning District–Specific Geologic Hazards

The City of San Diego Seismic Safety Study (2008) is a series of maps that identify the anticipated geologic hazards throughout the city. In addition to the general discussion of faulting and seismic-related hazards above, the following describes the specific geologic hazards for each of the planning districts. Where applicable, the City of San Diego Seismic Safety Study was used. According to the Seismic Safety Study, PD1, PD2, PD3, PD4 and PD7 are mapped within geologic hazard categories 11, 12, 13, 31, 52, and 53 (Figures 4.5-9 through 4.5-16). Definitions of each geologic hazard category and descriptions of the mapped hazard categories for each of the planning districts are provided below.

- Hazard category 11 is defined as an active, Alquist-Priolo Fault Zone.
- Hazard category 12 is defined as a potentially active, inactive, presumed inactive, or activity unknown fault zone.

- Hazard category 13 is defined as the Downtown Special Fault Zone.
- Hazard category 31 is defined as having a high potential for liquefaction, with shallow groundwater, major drainages, and hydraulic fills.
- Hazard category 52 is defined as other level areas, gently sloping to steep terrain with favorable geologic structure, low risk.
- Hazard category 53 is defined as level or sloping terrain, unfavorable geologic structure, low to moderate risk.

Planning Districts 8–10 are not within the City of San Diego and are not included in the hazards mapping. However, a discussion of the anticipated geologic hazards for each of these planning districts is also provided based on other available resources, including general plans and liquefaction maps for San Diego County.

Planning District 1: Shelter Island

As shown on Figure 4.5-9, PD1 is mapped within hazard categories 12 (unknown fault), 31 (liquefaction), 52 (favorable geologic structure), and 53 (unfavorable geologic structure). Hazard category 12 is mapped in the southwest portion of Shelter Island and the northern portion of the planning district near Harbor Drive. Most of the planning district is mapped within hazard category 31. Hazard category 52 is mapped near its northwestern boundary near Scott Street, and hazard category 53 is mapped near its southwestern boundary near Bessemer Path.

Planning District 2: Harbor Island

As shown on Figure 4.5-10, PD2 is mapped within hazard categories 11 (active Alquist-Priolo Fault Zone), 12 (unknown fault), and 31 (liquefaction). Hazard category 11 is mapped in the eastern portion of Harbor Island and extends north to Harbor Drive. Hazard category 12 is mapped in the eastern portion of Harbor Island. The entirety of PD2 is mapped as hazard category 31.

Planning District 3: Embarcadero

As shown on Figure 4.5-11, PD3 is mapped within hazard categories 12 (unknown fault), 13 (Downtown Special Fault Zone), and 31 (liquefaction). Hazard category 12 is mapped in the southern portion of the planning district and extends towards Embarcadero Marina Park North. Hazard Category 13 is mapped in the eastern and northern portions of the planning district that abut Pacific Highway and Harbor Drive. Most of PD3 is mapped as hazard category 31.

Planning District 4: Working Waterfront

As shown on Figure 4.5-12, PD4 is mapped within hazard categories 11 (active Alquist-Priolo Fault Zone), 13 (Downtown Special Fault Zone), and 31 (liquefaction). Hazard category 11 is mapped in the eastern portion of the Tenth Avenue Marine Terminal and extends nearly to the Coronado Bridge. Hazard category 13 is mapped in the northern portions of the planning district that abut Harbor Drive. Most of PD4 is mapped as hazard category 31.

Planning District 7: South Bay

As shown on Figure 4.5-13, PD7 is mapped within hazard categories 31 (liquefaction) and 52 (favorable geologic structure). Much of the planning district is mapped as hazard category 31, while hazard category 52 is mapped near the southeastern boundary.

Planning District 8: Imperial Beach Oceanfront

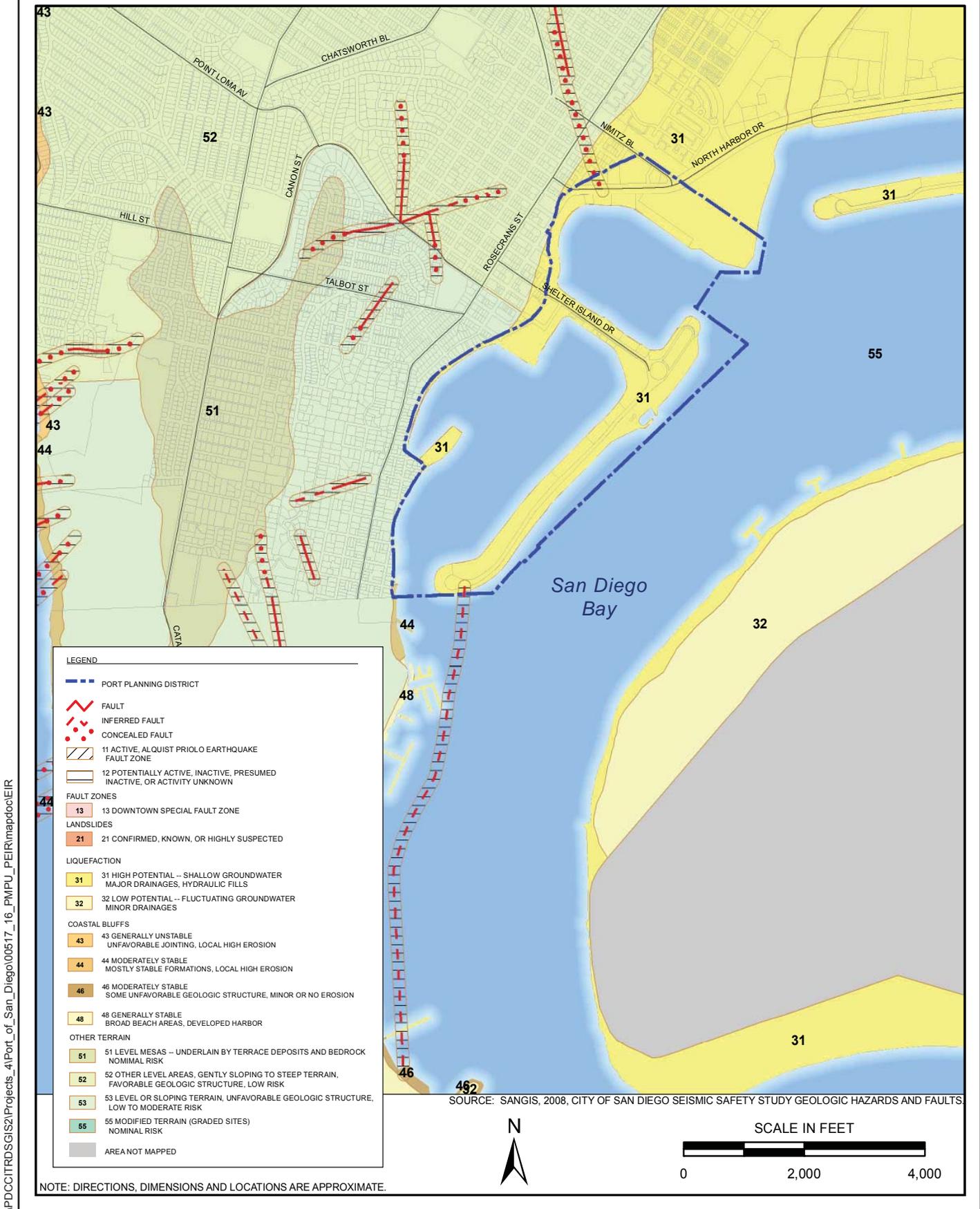
Planning District 8 can be expected to have a high potential for liquefaction, as shown on Figure 4.5-14. According to the City of Imperial Beach General Plan/Local Coastal Plan (2019), areas expected to have a high potential for liquefaction in the event of strong ground shaking include those areas underlain by loose, unconsolidated sediments and shallow groundwater. The La Nacion Fault is located approximately 2 miles east of Imperial Beach. Landslides are not anticipated throughout the flat portions of Imperial Beach that are within PD8.

Planning District 9: Silver Strand

Planning District 9 can be expected to have a high potential for liquefaction, as shown on Figure 4.5-15. According to the Draft Liquefaction map for the County of San Diego, the Silver Strand is located within an area mapped as having a liquefaction risk. The Silver Strand sections of the Rose Canyon Fault are located less than 1 mile west and east of PD9. Landslides are not anticipated throughout the relatively flat planning district.

Planning District 10: Coronado Bayfront

Planning District 10 can be expected to have a high potential for liquefaction. According to the Draft Liquefaction map for the County of San Diego, the Coronado Bayfront is located within an area mapped as having a liquefaction risk. According to the Coronado General Plan, areas underlain by hydraulic fill along the margins of San Diego Bay can be expected to be susceptible to earthquake-triggered differential settlement or lateral spreading caused by liquefaction. Additionally, active Silver Strand segments associated with the Rose Canyon Fault Zone are mapped within the planning district, as shown on Figure 4.5-16.



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**Figure 4.5-9
Geologic Hazards Planning District 1 - Shetler Island
Port Master Plan Update EIR**

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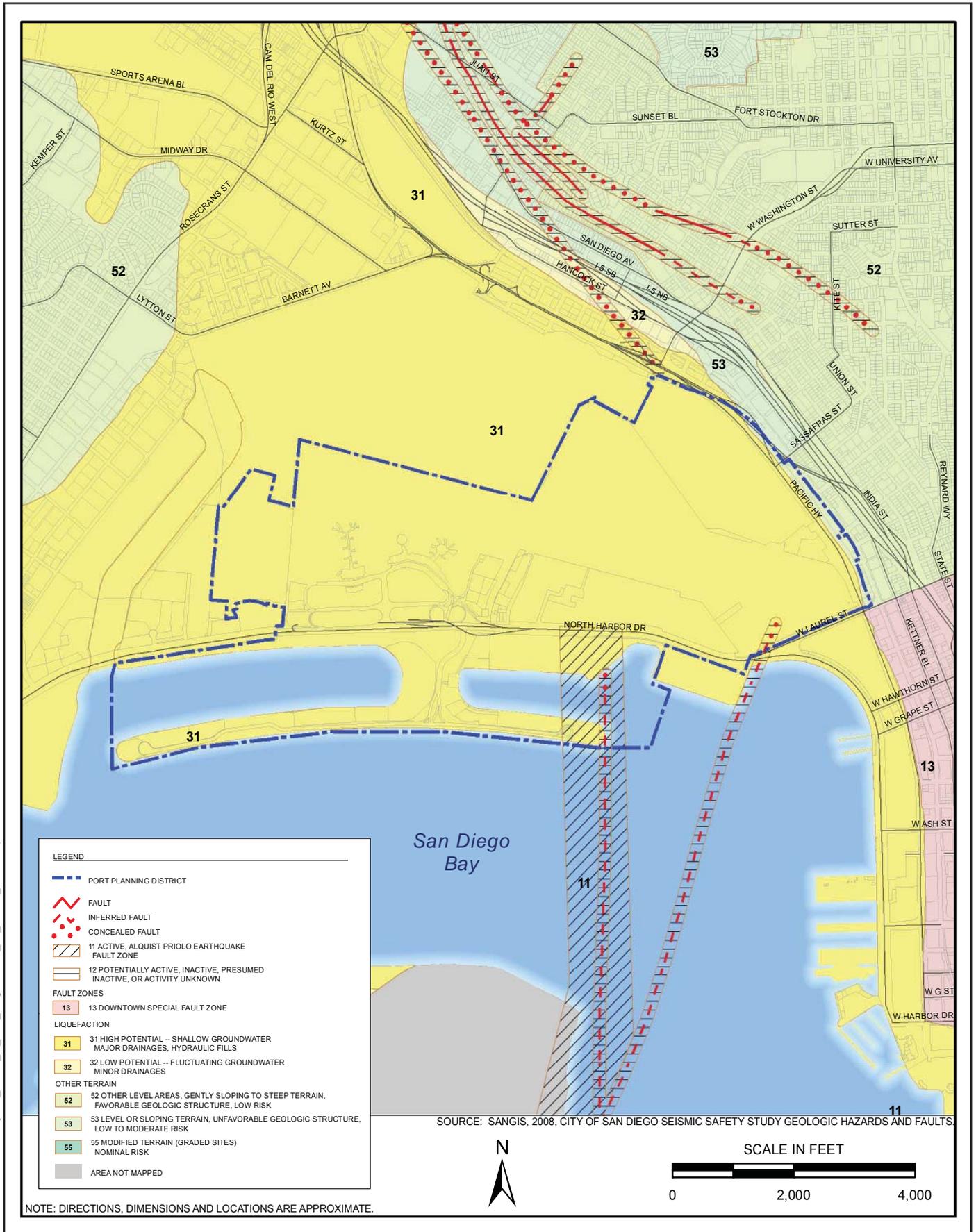
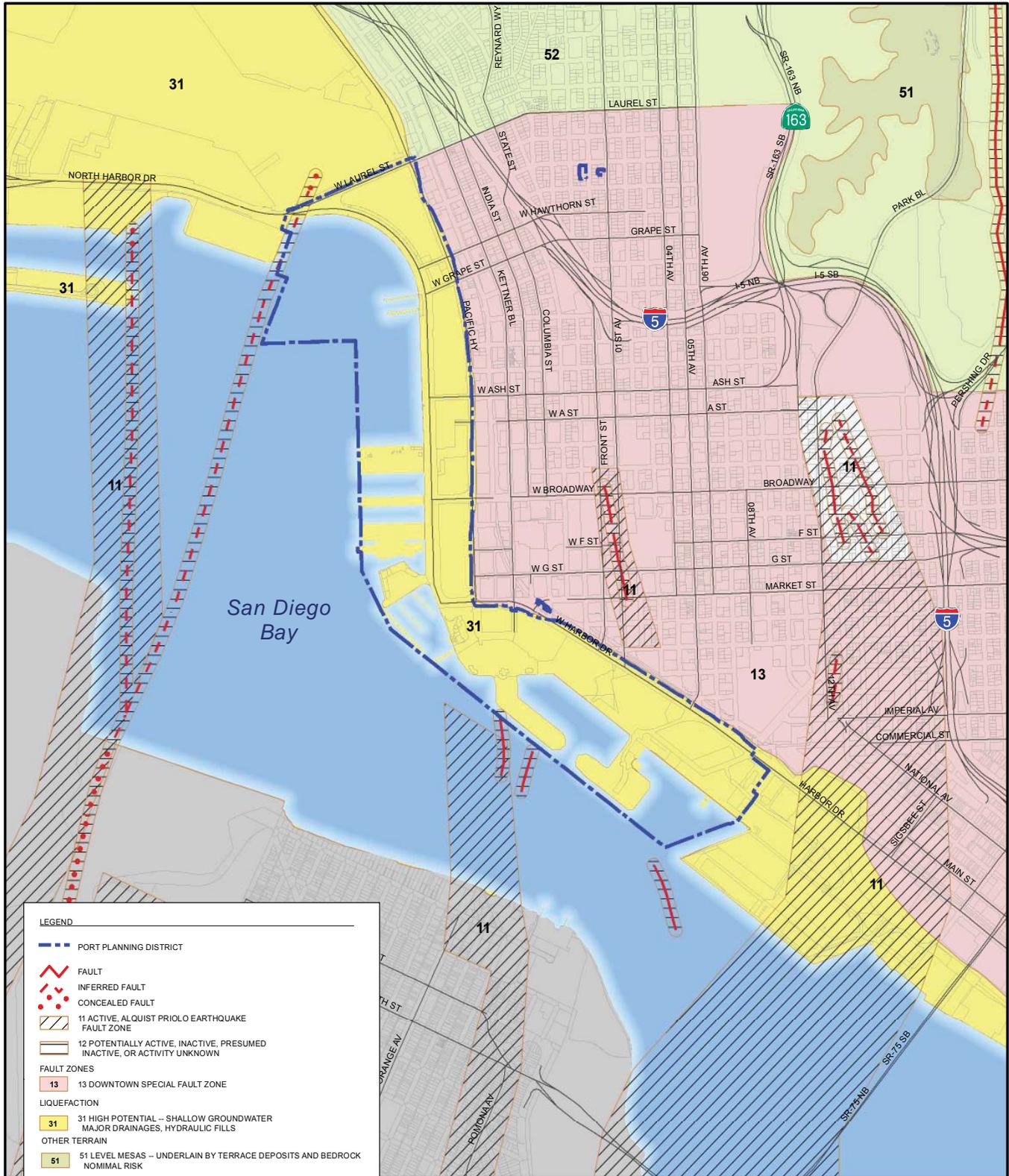


Figure 4.5-10
Geologic Hazards Planning District 2 - Harbor Island
Port Master Plan Update EIR





NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.



Figure 4.5-11
Geologic Hazards Planning District 3- Embarcadero
Port Master Plan Update EIR

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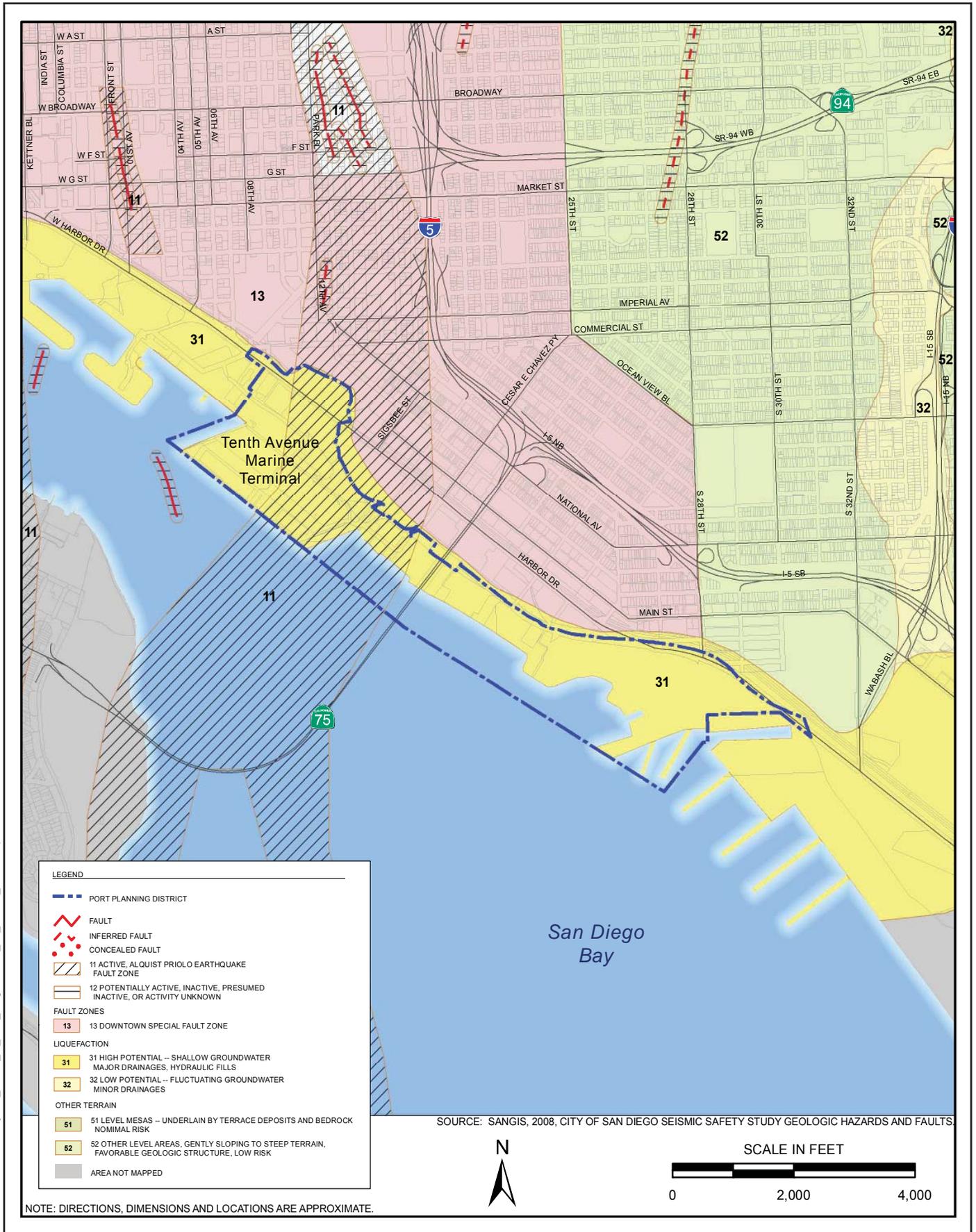


Figure 4.5-12
Geologic Hazards Planning District 4 - Working Waterfront
Port Master Plan Update EIR



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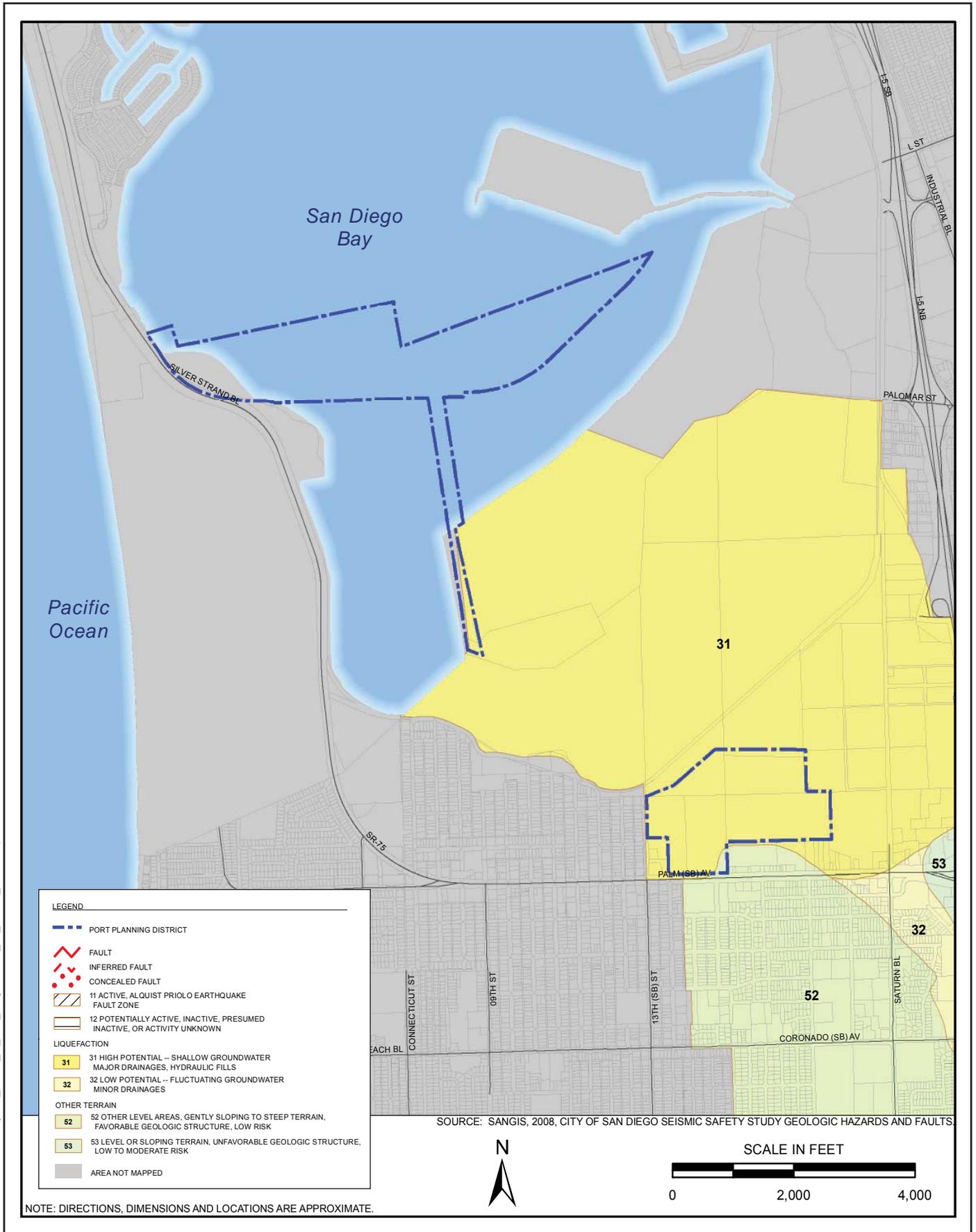


Figure 4.5-13
Geologic Hazards Planning District 7- South Bay
Port Master Plan Update EIR



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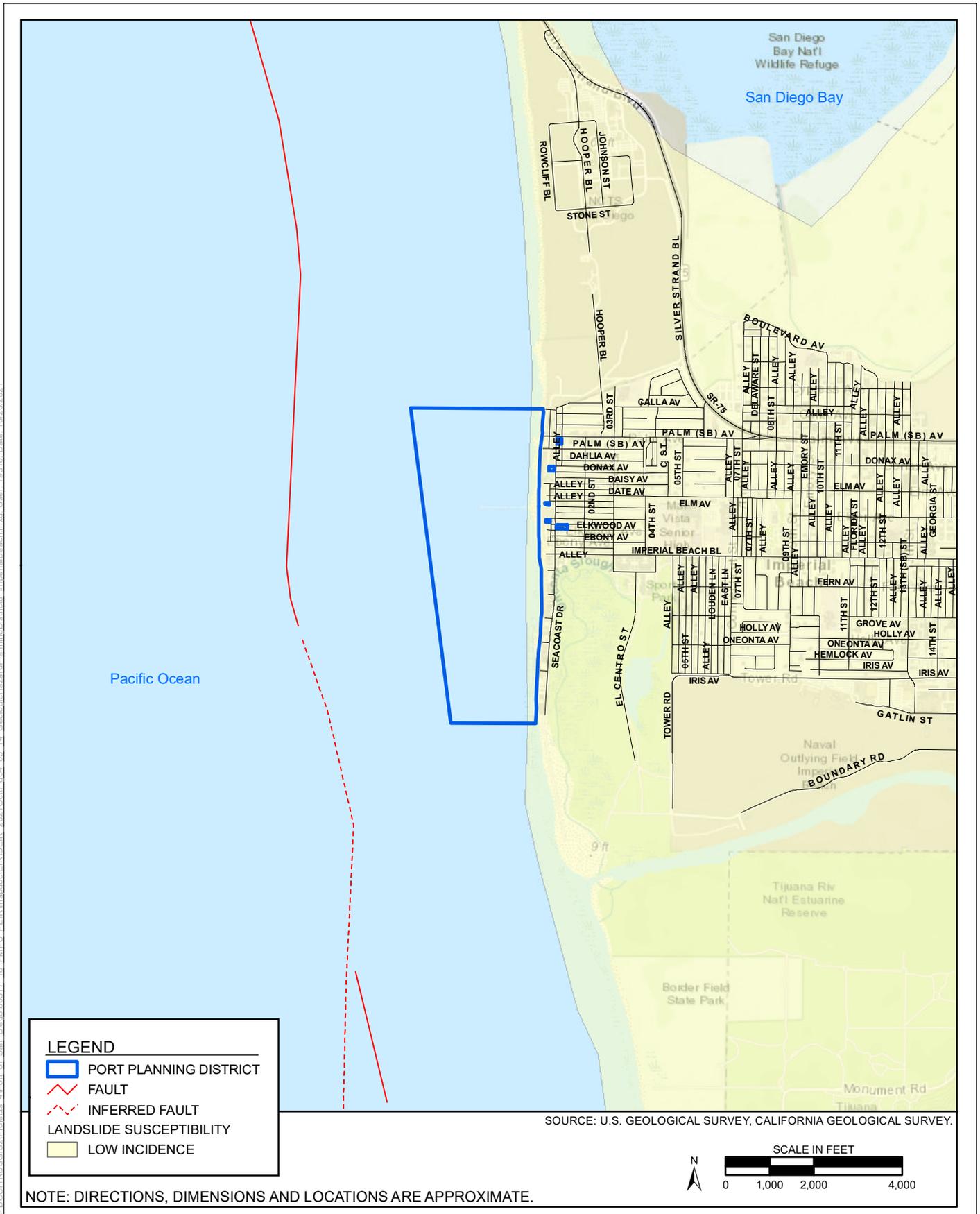


Figure 4.5-14
Geologic Hazards Planning District 8 - Imperial Beach
Port Master Plan Update EIR

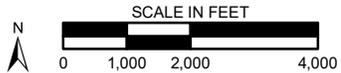
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LEGEND

- PORT PLANNING DISTRICT
- ~ FAULT
- LANDSLIDE SUSCEPTIBILITY
- LOW INCIDENCE

SOURCE: U.S. GEOLOGICAL SURVEY, CALIFORNIA GEOLOGICAL SURVEY.



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.



Figure 4.5-15
Geologic Hazards Planning District 9 - Silver Strand
Port Master Plan Update EIR

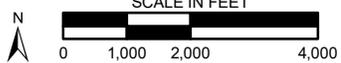
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LEGEND

- PORT PLANNING DISTRICT
- FAULT
- INFERRED FAULT
- CONCEALED FAULT
- ACTIVE, ALQUIST PRIOLO EARTHQUAKE FAULT ZONE
- LANDSLIDE SUSCEPTIBILITY
- LOW INCIDENCE

SOURCE: U.S. GEOLOGICAL SURVEY, CALIFORNIA GEOLOGICAL SURVEY.



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.



Figure 4.5-16
Geologic Hazards Planning District 10 - Coronado Bayfront
Port Master Plan Update EIR

4.5.2.4 Groundwater

Generally, groundwater depth can be expected to increase with increases in both ground surface elevation and lateral distance from bodies of water. Fluctuations in the groundwater level and perched conditions may occur due to variations in ground surface topography, sub-surface geologic conditions and structure, rainfall, irrigation, tidal fluctuations, and other factors.

Based on its coastal location, the proposed PMPU area has typical ground surface elevations between approximately 15 and 25 feet above mean sea level (MSL), and proximity to San Diego Bay and the Pacific Ocean. Average depths to groundwater are between 5 and 30 feet below ground surface for the planning districts, and should be anticipated at shallower depths as ground surface elevation decreases.

According to the Water Quality Control Plan for the San Diego Basin (Basin Plan), the proposed PMPU area is located within the Pueblo San Diego (908.00), Sweetwater (909.00), Otay (910.00), and Tijuana River (911.00) hydrologic units (HUs). Existing and potential beneficial uses of groundwater within these HUs may include municipal and domestic supply (MUN), agricultural supply (AGR), and industrial service supply (IND). Figure 4.5-17 shows the locations of the various HUs within the proposed PMPU area.

4.5.2.5 Soil Conditions

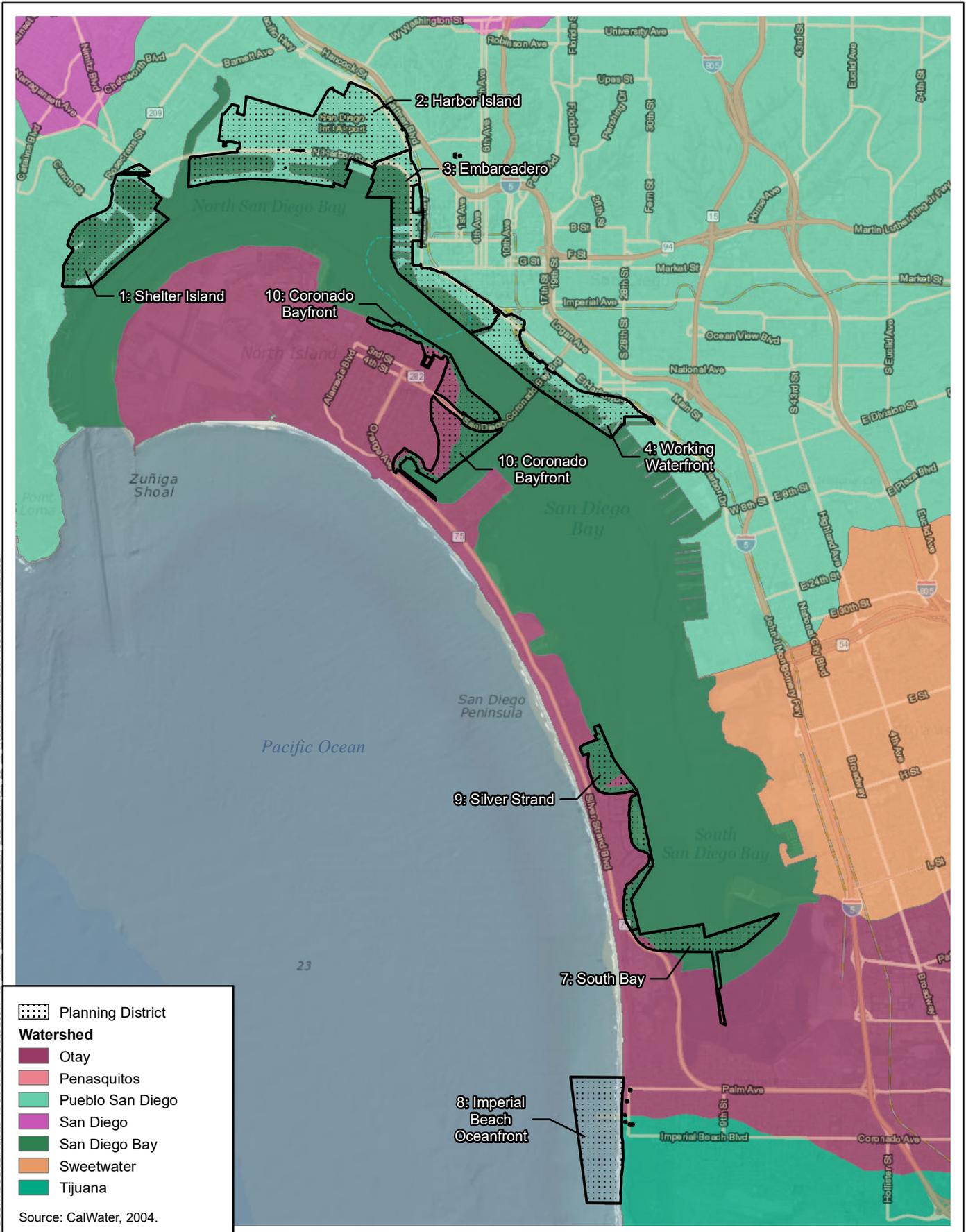
Expansive Soils

Expansive soils generally result from specific clay minerals that have the capacity to shrink or swell in response to changes in moisture content. Shrinking or swelling of foundation soils can lead to damage to foundations and engineered structures, including tilting and cracking. Clayey fill soils, alluvium, marine deposits, or old paralic deposits may also be moderately expansive. It is anticipated that expansive soils are present throughout the proposed PMPU area based on laboratory testing performed on soil samples obtained during previous projects within the San Diego Unified Port District's (District's) jurisdiction (Appendix F). The possibility for expansive soils to cause damage to foundations and other structures is still present despite the presence of shallow groundwater in the proposed PMPU area.

Erodible Soils

The soil types mapped within the proposed PMPU area were identified using the U.S. Department of Agriculture (USDA) Soil Survey. A summary of the mapped soil types and their erosion potential is presented in Table 4.5-3 for each planning district.

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Planning District
Watershed
 Otay
 Penasquitos
 Pueblo San Diego
 San Diego
 San Diego Bay
 Sweetwater
 Tijuana

Source: CalWater, 2004.




0 3,750 7,500 Feet
1 inch = 7,500 feet

Figure 4.5-17
Hydrologic Units
Port Master Plan Update

Table 4.5-3. Soil Series Characteristics

Soil Series and Map Symbol	Erosion Potential
PD1: Shelter Island	
Made land (Md)	Low to moderate
Marina loamy coarse sand (MIC)	Moderate
Reiff fine sandy loam, 0 to 2% slopes (RkA)	Moderate
Reiff fine sandy loam, 2 to 5% slopes (RkB)	Moderate
Urban land (Ur)	Low to moderate
PD2: Harbor Island	
Made land (Md)	Low to moderate
Urban land (Ur)	Low to moderate
PD3: Embarcadero	
Urban land (Ur)	Low to moderate
PD4: Working Waterfront	
Urban land (Ur)	Low to moderate
PD7: South Bay	
Grangeville fine sandy loam (GoA)	Moderate
Lagoon Water (LG-W)	Moderate to high
Huerhuero loam, 2 to 9% slopes (HrC)	Moderate
Huerhuero-Urban land complex, 2 to 9% slopes (HuC)	Moderate
PD8: Imperial Beach Oceanfront	
Coastal beaches (Cr)	Moderate to high
Marina loamy coarse sand (MIC)	Moderate to high
Tidal flats (Tf)	Moderate to high
PD9: Silver Strand	
Carlsbad gravelly loamy sand (CbB)	Moderate
Coastal beaches (Cr)	Moderate to high
Marina loamy coarse sand (MIC)	Moderate
Tidal flats (Tf)	Moderate to high
PD10: Coronado Bayfront	
Coastal beaches (Cr)	Moderate to high
Made land (Md)	Low to moderate
Marina loamy coarse sand (MIC)	Moderate

Note: PD5, National City Bayfront, and PD6, Chula Vista Bayfront, are not part of the proposed PMPU.
Source: Appendix F.

4.5.2.6 Unique Paleontological Resources and Geologic Features

Paleontological resources (fossils) are the remains and/or traces of prehistoric life and represent an important and nonrenewable natural resource. Fossil remains are found in the geologic units (i.e., formations) within which they were originally buried. Fossils or fossil deposits are generally regarded as older than 11,700 years, the generally accepted temporal boundary marking the end of

the last late-Pleistocene glacial event and the beginning of the current period of climatic amelioration of the Holocene. For planning purposes, paleontological resources can be thought of as including not only actual fossil remains and traces, but also the localities where those fossils are collected and the geologic units containing the localities. A fossil collection locality is the combined geographic and stratigraphic context of fossils—the place on the Earth and stratum (deposited during a particular time in Earth’s history) from which the fossils were collected. Localities themselves may persist for decades, in the case of a fossil-bearing outcrop that is protected from natural or human impacts, or may be temporarily exposed and ultimately destroyed, as is the case for fossil-bearing strata uncovered by erosion or construction.

A unique paleontological resource is any fossil or assemblage of fossils, or paleontological resource site or formation that meets any one of the following criteria (County of San Diego 2009):

- The best example of its kind locally or regionally.
- Illustrates a paleontological or evolutionary principle (e.g., faunal succession; plant or animal relationships).
- Provides a critical piece of paleobiological data (illustrates a portion of geologic history or provides evolutionary, paleoclimatic, paleoecological, paleoenvironmental, or biochronological data).
- Encompasses any part of a “type locality” of a fossil or formation.
- Contains a unique or particularly unusual assemblage of fossils.
- Occupies a unique position stratigraphically within a formation.
- Occupies a unique position, proximally, distally or laterally within a formation’s extent or distribution.

A paleontological record search was conducted by the San Diego Natural History Museum on May 1, 2017 (San Diego Natural History Museum 2017) to determine the geologic units underlying each planning district and to identify any recorded fossil collection localities at or in the vicinity of each planning district. Four geologic units underlay the planning districts: artificial fill, Holocene marine deposits, Holocene alluvial floodplain deposits, and Bay Point Formation (old paralic deposits, unit 6).

Artificial fill deposits result from human construction, mining, or quarrying activities and include compacted engineered and non-engineered fill. Holocene marine deposits (mapped as Qmb and Qmo by Kennedy and Tan 2008) occur along modern shorelines and offshore, and consist of mostly fine- to medium-grained sand and silt. Holocene alluvial floodplain deposits (mapped as Qya by Kennedy and Tan 2008) occur in modern canyons and floodplains. Holocene alluvial deposits are usually less than 10,000 years old and consist of poorly consolidated, poorly sorted, permeable floodplain deposits of sandy, silty or clay-bearing alluvium. Bay Point Formation is a geological stratum consisting of nearshore marine and lagoonal deposits of the Pleistocene age (approximately 85,000 to 500,000 years old). Specifically, the deposits of the Bay Point Formation are situated atop the Nestor terrace (approximately 120,000 years old) with the exception of the Sweetwater District where the deposits are undivided (San Diego Natural History Museum 2017). The Bay Point Formation is mapped as Unit 6, old paralic deposits (Qop₆) by Kennedy and Tan (2008).

A search of the documented fossil collection localities within the planning districts and a 0.25-mile buffer indicated that a total of 112 fossil collection localities are present. These localities produced

trace fossils (e.g., sponge borings in shell, worm borings in shell and matrix, and worm tubes), and fossilized impressions of plants (e.g., calcareous algae and vascular plants), marine invertebrates (e.g., foraminifers, bryozoans, corals, chitons, snails, clams, mussels, oysters, scallops, tusk shells, ostracods, crabs, shrimp, barnacles, sea urchins, and sand dollars), marine vertebrates (e.g., sharks, skates, rays, bony fish, and whales), and terrestrial vertebrates (e.g., frogs, snakes, birds, rodents, horses and mammoths) (San Diego Natural Museum 2017). Six fossil localities were found within the boundaries of two of the planning districts, one within PD and five within PD10. Based on City of San Diego's California Environmental Quality Act (CEQA) Significance Determination Thresholds (2016),¹ artificial fill is assigned no paleontological sensitivity, Holocene marine deposits are assigned low paleontological sensitivity, Holocene alluvial floodplain deposits are assigned low paleontological sensitivity, and Bay Point Formation is assigned a high paleontological sensitivity. Table 4.5-4 summarizes the paleontological sensitivity by planning district based on the geologic units present. Figures 4.5-1 through 4.5-8 show the geologic units that underlay each of the planning districts.

Table 4.5-4. Geologic Formations and Paleontological Sensitivity by Planning District

Planning District	District Name	Geologic Unit Present	Paleontological Sensitivity
PD1	Shelter Island	Artificial Fill	None
		Holocene Marine Deposits	Low
		Bay Point Formation	High
PD2	Harbor Island	Artificial Fill	None
		Holocene Marine Deposits	Low
PD3	Embarcadero	Artificial Fill	None
		Holocene Marine Deposits	Low
		Bay Point Formation	High
PD4	Working Waterfront	Artificial Fill	None
		Holocene Marine Deposits	Low
PD7	South Bay	Artificial Fill	None
		Holocene Marine Deposits	Low
		Holocene Alluvial Flood Plain Deposits	Low
		Bay Point Formation	High
PD8	Imperial Beach Oceanfront	Holocene Marine Deposits	Low
		Holocene Alluvial Flood Plain Deposits	Low
		Bay Point Formation	High
PD9	Silver Strand	Artificial Fill	None
		Holocene Marine Deposits	Low
		Bay Point Formation	High
PD10	Coronado Bayfront	Artificial Fill	None
		Holocene Marine Deposits	Low
		Bay Point Formation	High

¹ The City of San Diego's paleontology thresholds were developed in consultation with the San Diego Natural History Museum based on expert opinion of qualified paleontologists and, therefore, are appropriate for general use.

In addition, San Diego County defines a unique geologic feature as “a site that exhibits distinctive characteristics, is exclusive to the region, or provides a key piece of geologic information important in the study of geology or geologic history” (County of San Diego 2011). Examples may include unique rock outcrops (e.g., natural bridge), type localities of named geologic formations (e.g., type locality of Scripps Formation in the sea cliffs north of Scripps Institute of Oceanography), information-rich geologic exposures (e.g., cliff face exposing faulted sedimentary layers), or unique landform (e.g., Round Mountain in Jacumba Valley, which represents a volcanic plug) (County of San Diego 2011). Per the general and community plans for the adjacent cities, no unique geologic features have been identified as occurring within or adjacent to the proposed PMPU area. Moreover, the proposed PMPU does not contain any of the features described above.

4.5.3 Laws, Regulations, Plans, and Policies

4.5.3.1 Federal

Occupational Safety and Health Act of 1970

The Occupational Safety and Health Act establishes the framework for safe and healthful working conditions for working men and women by authorizing enforcement of the standards developed under the act. The act assigns the Occupational Safety and Health Administration (OSHA) two regulatory functions: setting standards and conducting inspections to ensure that employers are providing safe and healthful workplaces. OSHA standards may require that employers adopt certain practices, means, methods, or processes reasonably necessary and appropriate to protect workers on the job. Employers must become familiar with the standards applicable to their establishments and eliminate hazards.

Compliance with standards may include implementing engineering controls to limit exposures to physical hazards and toxic substances, implementing administrative controls, and ensuring that employees have been provided with, have been effectively trained on, and use personal protective equipment when required for safety and health, where the former controls cannot be feasibly implemented. Employees must comply with all rules and regulations that apply to their own actions and conduct. Even in areas where OSHA has not set forth a standard addressing a specific hazard, employers are responsible for complying with the act’s “general duty” clause, which states that each employer “shall furnish...a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees” (Section 5(a)(1)).

Regulations defining safe standards have been developed for general industry, construction, maritime, recordkeeping, and agriculture. OSHA standards specific to safety and health regulations pertaining to construction are listed in 29 Code of Federal Regulations (CFR) 1926, Subtitle B. Specifically, subpart C handles general safety and health provisions including safety training and education, first aid and medical attention, fire protection and prevention, and personal protective equipment. Subpart D is specific to occupational health and environmental controls such as radiation, gases/vapors/fumes/dust, lead, hazardous chemicals, and noise exposure. Subpart P handles excavation work and safety. Subparts Q and R handle concrete/masonry and steel structures, respectively. In addition, several more subparts provide additional requirements.

4.5.3.2 State

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Act (Public Resources Code [PRC] 2621 et seq.) was enacted by the State of California in 1972.² The act's primary purpose is to prohibit the construction of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults. It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to active faults. In addition, the Alquist-Priolo Act requires the State Geologist to establish regulatory zones, known as "earthquake fault zones," around the surface traces of active faults and to issue appropriate maps to assist cities and counties in planning, zoning, and building regulation functions. Maps are distributed to all affected cities and counties for the controlling of new or renewed construction and are required to sufficiently define potential surface rupture or fault creep. The State Geologist is charged with continually reviewing new geologic and seismic data and revising existing zones and delineating additional earthquake fault zones when warranted by new information. According to the Alquist-Priolo Act, before a project can be permitted, cities and counties shall require a geologic investigation, prepared by a licensed geologist, to demonstrate that buildings will not be constructed across active faults. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back. Although setback distances may vary, a minimum 50-foot setback is required.

Under the Alquist-Priolo Act, faults are zoned, and construction along or across them is strictly regulated if the faults are considered "sufficiently active" and "well-defined." A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for the purposes of the act as within the last 11,000 years). A fault is considered well-defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment.

International Building Codes

Development and building design standards, implemented through the California Building Code (CBC), require the proposed project to comply with appropriate seismic design criteria in the International Building Code, adequate drainage facility design, and preconstruction soils and grading studies. Seismic design standards have been established to reduce many of the structural problems occurring because of major earthquakes. In 1998, the code was revised as follows.

- Upgrade the level of ground motion used in the seismic design of buildings.
- Add site amplification factors based on local soils conditions.
- Improve the way ground motion is applied in detailed design.

California Building Code

The California Code of Regulations, Title 24 (California Building Code or CBC) applies to all applications for building permits. The CBC (also called the California Building Standards Code) has incorporated the International Building Code, which was first enacted by the International

² The act was originally titled the Alquist-Priolo Geologic Hazards Zone Act.

Conference of Building Officials in 1927 and has been updated approximately every 3 years since that time. The current version of the CBC (2019) became effective on January 1, 2020. Building codes provide minimum standards regulating a number of aspects of construction that are relevant to geology and geologic hazards. Title 24, Part 2 of the CBC provides building codes and standards for the design and construction of structures in California. The CBC requires, among other things, seismically resistant construction and foundation and soil investigations prior to construction. The CBC also establishes grading requirements that apply to excavation and fill activities, and requires the implementation of erosion control measures.

The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. In addition, the CBC contains necessary California amendments, which are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements of the CBC take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC. Future development allowed under the proposed PMPU would be required to comply with the CBC, including Part 2, Volume 2, Chapter 18, Soils and Foundations, which outlines the minimum standards for structural design and construction. This includes the preparation of geotechnical evaluations, which, among other requirements, include a record of the soil profile, regulation of active faults in the area, recommendations for foundation type and design criteria that address issues, as applicable, such as (but not limited to) bearing capacity of soils, provisions to mitigate the effects of expansive soils, liquefaction, settlement, and varying soil strength. Section 1803.1.1.3 of Chapter 18 states that if a building department, or other appropriate enforcement agency, determines that recommended action(s) presented in the geotechnical evaluations are likely to prevent structural damage, the approved recommended action(s) must be made a condition to the building permit (Section 1803.1.1.3 of Chapter 18).

The CBC also provides standards for various aspects of construction, including but not limited to excavation, grading, and earthwork construction; preparation of the site prior to fill placement, specification on fill materials and fill compaction and field testing; retaining wall design and construction, foundation design and construction; and seismic requirements. It includes provisions to address issues such as (but not limited to) construction on expansive soils, liquefaction potential, and soil strength loss. The CBC sets seismic design requirements based on seismic risk categories, which are associated with a structure's occupancy category (i.e., structures that represent low hazard to human life, structures that represent substantial hazard to human life, structures designated as essential facilities based on the proposed use), and a structure's seismic risk category (i.e., the severity of the design earthquake ground motion and specific soil properties at the site). In

accordance with California law, project design and construction would be required to comply with provisions of the CBC. Local agencies must ensure that development in their jurisdictions complies with guidelines contained in the CBC. Cities and counties can, however, adopt building standards beyond those provided in the code.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: the State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards; and cities and counties are required to regulate development within mapped seismic hazard zones.

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Under PRC Section 2697, cities and counties must require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard. Each city or county shall submit one copy of each geotechnical report, including mitigation measures, to the State Geologist within 30 days of its approval.

Construction General Permit (Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ and Order 2012-006-DWQ)

Construction activities that disturb 1 acre or more of land must obtain coverage under the State Water Resources Control Board (SWRCB) Construction General Permit (Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ and Order 2012-006-DWQ).³ Under the terms of the permit, applicants must file complete and accurate Notice of Intent and Permit Registration Documents with the State Water Resources Control Board. Applicants must also demonstrate conformance with applicable construction best management practices (BMPs) and prepare a construction Storm Water Pollution Prevention Plan (SWPPP) containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the proposed PMPU area. BMPs include but are not limited to silt fences, straw wattles, sediment traps, gravel sandbag barriers. The Construction General Permit requires dischargers to consider good housekeeping measures for construction materials, waste management, vehicle storage & maintenance, landscaping materials, and potential pollutant sources.⁴ Dischargers are also required to consider measures to reduce erosion such as but not limited to, covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. Sediment control BMPs must be considered by dischargers as secondary means of preventing storm water contamination. Sediment control BMPs could include but are not limited to silt fences or straw wattles. Lastly, the discharger is required by the Construction General Permit

³ For additional details, please see the SWRCB Orders which are available online at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

⁴ See pp. 32-33 of the Construction General Permit pdf at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf.

to manage run-on and runoff from a project site using measures such as but not limited to installing berms or other temporary diversions.

Industrial General Permit (Order No. 2014-0057 DWQ)

Industrial facilities with specific standard industrial codes (SIC) that discharge stormwater to waters of the United States must obtain coverage and comply with the requirements of the General Permit for Stormwater Discharges Associated with Industrial Activities (Industrial General Permit), Order No. 2014-0057-DWQ (National Pollutant Discharge Elimination System [NPDES] No. CAS000001), issued by the SWRCB. Under the Industrial General Permit, dischargers must demonstrate conformance with applicable industrial BMPs and prepare an industrial SWPPP, containing a site map that shows the site perimeter, areas where industrial activities occur, stormwater collection and discharge points, and drainage patterns across the site. The Industrial General Permit includes the required minimum BMP categories that must be implemented and maintained at industrial facilities to prevent pollutants from entering stormwater discharges or reduce their levels. The associated SWPPP includes a Site Monitoring Implementation Plan, as required by the Industrial General Permit, that describes (1) the monthly dry-weather visual observation, (2) the stormwater visual observation, and (3) the facility-specific stormwater sampling program at the facility, which includes sample collection locations (discharge points), contaminants for analysis, and potential pollution sources.

The design standard for structural treatment controls required by the Industrial General Permit, includes a volume-based treatment design that would treat the volume of runoff produced from an 85th-percentile, 24-hour storm event, as determined from local historical rainfall records. This design standard is consistent with the treatment control requirements necessary to meet the redevelopment project BMP requirements of the Municipal Stormwater Permit and District *BMP Design Manual*, as discussed under Section 4.5.3.3, *Local*, below.

California Public Resources Code

Section 5097.5 of PRC addresses paleontological resources and states that “no person shall knowingly and willfully excavate, upon, or remove, destroy, injure, or deface” any “vertebrate paleontological site, including fossilized footprints, or any other paleontological feature situated” on public lands without the “express permission of the public agency having jurisdiction over the lands.” Violation of this section is a misdemeanor.

As used in PRC Section 5097.5, “public lands” means lands owned by or under the jurisdiction of the State or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with PRC Section 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

4.5.3.3 Local

Future projects allowed under the proposed PMPU would be required to obtain grading and construction permits from the jurisdictions in which they are located, including the cities of Coronado, Imperial Beach, and San Diego. Therefore, the following city ordinances would apply to future projects within the proposed PMPU area.

City of San Diego Municipal Code

Chapter 14, Article 2, Division 1: Grading Regulations

Earthwork activities, including grading, are regulated by the City of San Diego Municipal Code, Chapter 14, Article 2, Division 1, which provides standards for slope stability, protection of property, erosion control, water quality, and landform preservation and to protect the public health, safety, and welfare of persons, property, and the environment. The following sections are related to geology and soils and apply to future development allowed under the proposed PMPU within PD1, PD2, PD3, and PD4.

Section 142.0130: Development Standards for Grading

All *grading* shall be designed and performed in conformance with applicable City Council policies and the standards established in the Land Development Manual.

Section 142.0131: Geotechnical Report Requirements

All *grading* shall be designed to incorporate the recommendations of any required *geotechnical reports*.

All *geotechnical reports* shall be prepared in accordance with the standards established in the Lands Development Manual and the City of San Diego Technical Guidelines for Geotechnical Reports.

Section 142.0135: Grading Within the *Special Flood Hazard Area*

Grading within the *Special Flood Hazard Area* shall comply with Chapter 14, Article 2, Division 2 (Drainage Regulations) and Chapter 14, Article 3, Division 1 (Environmentally Sensitive Lands Regulations).

Section 142.0146: Erosion, Sedimentation, and Water Pollution Control

All *grading* work shall incorporate erosion and siltation control measures in accordance with Chapter 14, Article 2, Division 4 (Landscape Regulations) and the standards established in the Land Development Manual.

All *development* shall be conducted to prevent erosion and stop sediment and pollutants from leaving the work site. The property owner is responsible to implement and maintain temporary and permanent erosion, sedimentation, and water pollution control measures to the satisfaction of the City Manager, whether or not such measures are a part of approved plans. The property owner shall install, monitor, maintain, and revise these measures, as appropriate, to ensure their effectiveness. Controls shall include measures outlined in Chapter 14, Article 2, Division 2 (Storm Water Runoff Control and Drainage Regulations) that address the *development's* potential erosion and sedimentation impacts.

Section 142.0148: Protection of Adjacent Properties and Public Rights-of-Way

During *grading*, the property owner shall take all necessary measures to protect adjacent property and public rights-of-way from damage that may result from the work. The property owner shall provide *fences* or barricades needed to eliminate any hazard to the public in their normal use of the property or *public right-of-way* as follows:

Where a temporary excavation is adjacent to an existing developed public right-of-way or other public property and the slope gradient is 50 percent (2 horizontal feet to 1 vertical foot) or steeper or the height of the *excavation* is more than 6 feet, temporary *fences* or barricades shall be provided adjacent to the *excavation* satisfactory to the City Engineer. The *fences* or barricades shall be constructed and maintained as long as the hazard resulting from the *excavation* exists.

Where a permanent *excavation* is adjacent to an existing developed *public right-of-way* or other public property and the slope gradient is 50 percent (2 horizontal feet to 1 vertical foot) or steeper, the height of the *excavation* is more than 6 feet, and the top of the slope is within 10 feet of the *public right-of-way*, the property owner shall construct a permanent, 4-foot-high *fence* adjacent to the *public right-of-way*, satisfactory to the City Engineer.

The City Engineer may modify the requirements of this section where it is evident that the *grading* work will present no hazard to the adjacent property or *public rights-of-way*.

Section 142.0151: Paleontological Resources Requirements for Grading Activities

Paleontological resources monitoring shall be required in accordance with the General Grading Guidelines for Paleontological Resources in the Land Development Manual for any of the following:

1. *Grading* that involves 1,000 cubic yards or greater, and 10 feet or greater in depth, in a High Resource Potential Geologic Deposit/Formation/Rock Unit; or
2. *Grading* that involves 2,000 cubic yards or greater, and 10 feet or greater in depth, in Moderate Resource Potential Geologic Deposit/Formation/Rock Unit; or
3. *Grading* on a fossil recovery site or within 100 feet of the mapped location of a fossil recovery site.

If paleontological resources, as defined in the General Grading Guidelines for Paleontological Resources, are discovered during *grading*, notwithstanding Section 142.0151(a), all *grading* in the area of discovery shall cease until a qualified paleontological monitor has observed the discovery, and the discovery has been recovered in accordance with the General Grading Guidelines for Paleontological Resources.

Chapter 14, Article 5, Division 18: Additions and Modifications to Chapter 18 of the California Building Code

(a) Chapter 18 of the California Building Code is adopted by reference with modifications and additions pursuant to Sections 145.0105 and 145.0106 of the Land Development Code.

(b) Section 1803 is adopted by reference with modifications and additions pursuant to Sections 145.0105 and 145.0106 of the Land Development Code.

(c) Section 1801, Section 1802, and Sections 1804 through 1810 are adopted by reference without change pursuant to Section 145.0103 of the Land Development Code.

Chapter 12, Article 9, Division 2: Building Permit Procedures

Section 129.0201: Purpose of Building Permit Procedures

The purpose of these procedures is to establish the process for review of Building Permit applications for compliance with the minimum standards necessary to safeguard life or limb, public

health, property, and welfare. The intent of these procedures is to review the proposed design, construction methods, and type and quality of materials used for new construction or for construction involving existing structures.

Section 129.0202: When a Building Permit Is Required

(a) No structure regulated by the Land Development Code shall be erected, constructed, enlarged, altered, repaired, improved, converted, permanently relocated or partially demolished unless a Building Permit has first been obtained from the Building Official, except as exempted in Sections 129.0202(b) and 129.0203.

Section 129.0206: Who May Prepare Plans for Building Permits

If plans or other material submitted are not prepared by an architect or engineer licensed by the State of California, the Building Official may require the applicant to demonstrate that State law does not require the material to be prepared by a licensed architect or engineer. The Building Official may require plans, computations, and specifications to be prepared by an architect or engineer licensed by the State of California, in circumstances where preparation by a licensed professional is not required by State law.

Section 129.0210: Plan Review Procedures

The application, plans, specifications, and other data filed by an applicant for a Building Permit shall be reviewed by the Building Official. The plans may be reviewed by other departments of the City to verify compliance with any other applicable provisions of the Municipal Code.

City of Coronado Municipal Code

Title 70, Chapter 70.20: California Building Code

The City of Coronado has adopted the California Building Code, 2019 Edition, California Code of Regulations, Title 24, Part 2, Volumes 1 and 2 as published by the California Building Standards Commission based on the International Building Code, as the City Building Code for the purpose of prescribing regulations in the City of Coronado for the erection, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment, use, height, area, and maintenance of building and structures or any appurtenances connected or attached to such buildings or structures within this jurisdiction.

70.20.020 Appendices

The City of Coronado has adopted the California Building Code Appendix J: Grading.

City of Imperial Beach Municipal Code

Title 15, Chapter 15.06: Building Code

Except as provided in Chapter 15.02 (Administrative Code) and Chapter 15.06, the City of Imperial Beach has adopted the 2019 California Building Code (Part 2 of Title 24 of the California Code of Regulations) as the Building Code of the City of Imperial Beach.

Title 15, Chapter 15.54: Grading Permits and Plans

This chapter provides grading requirements to address slope stability, protection of property, erosion control, and water quality and to protect the public health, safety, and welfare of persons, property, and the environment.

Section 15.54.030: Grading Permit

No grading, including clearing of vegetative matter, shall be done until all necessary environmental clearances are secured and reviewed by the city for the work listed in this section. The following work shall require a grading permit:

- A. Any grading within open space easements or city-owned open space;
- B. Any grading required for the restoration of unauthorized grading;
- C. Any grading within the one hundred-year floodplain;
- D. Any grading as a condition of approval of a discretionary permit, including subdivision maps, parcel maps, conditional use permits or other discretionary approvals;
- E. Any grading that includes any of the following:
 - 1. Excavation or fill that results in a slope with a gradient of twenty-five percent or greater (four horizontal feet to one vertical foot) and for which the depth or height at any point is more than three feet measured vertically at the face of the slope from the top of the slope to the bottom of the slope;
 - 2. Excavation or fill for which the depth or height at any point from the lowest grade to the highest grade at any time during the proposed grading is more than eighteen inches measured vertically;
 - 3. Excavation or fill greater than fifty cubic yards;
 - 4. Grading for which the graded area is more than one acre.

Section 15.54.110: Lot Grading – Safety Precautions

- A. If, at any stage of work for which an approved grading plan, or a grading permit, is required, the city engineer determines that authorized grading is likely to endanger any public or private property or result in the deposition of debris on any public way or interfere with any existing drainage course, the city engineer may specify and require reasonable safety precautions to avoid the danger. The permittee may be responsible for removing excess soil and debris deposited upon adjacent and downstream public or private property resulting from his/her grading operations. Soil and debris shall be removed and damage to adjacent and downstream property repaired, as directed by the city engineer. Erosion and siltation control shall require temporary or permanent siltation basins, energy dissipaters, or other measures as field conditions warrant, whether or not such measures are a part of approved plans. Cost associated with any work outlined in this section shall be incurred by the permittee.
- B. No off-site work will be required when, in the opinion of the city engineer, the permittee has properly implemented and maintained erosion control measures and the deposition of soil and

debris or erosion on adjacent properties is the direct or indirect result of actions of the downstream property owner.

Municipal Stormwater Permit (Order No. R9-2013-0001 as amended by Order Nos. R9-2015-001 and R9-2015-0100)

The Municipal Stormwater Permit (Order No. R9-2013-0001, as amended by Order Nos. R9-2015-001 and R9-2015-0100) is an NPDES permit that requires the owners and operators of MS4s within the San Diego region to implement management programs that limit discharges of pollutants and non-stormwater discharges to and from their MS4. The Municipal Stormwater Permit requires the District and other “co-permittees” to develop watershed-based Water Quality Improvement Plans (WQIPs) and Jurisdictional Runoff Management Plans (JRMPs). The Municipal Stormwater Permit emphasizes watershed program planning and program outcomes. The intent of the permit is to enable each jurisdiction to focus its resources and efforts to:

- Reduce pollutants in stormwater discharges from its MS4,
- Effectively prohibit non-stormwater discharges to its MS4, and
- Achieve the interim and final WQIP numeric goals.

San Diego Bay Watershed Water Quality Improvement Plan

The Municipal Stormwater Permit requires development of the San Diego Bay WQIP. The purpose of the WQIP is to guide municipal stormwater permit co-permittees, including the District, via its JRMP, toward improving water quality in MS4 discharges and receiving waters. In the WQIP, priorities and goals are established, and each jurisdiction identifies strategies to assist in attaining the goals. This approach establishes the foundation that the District uses to develop and implement its JRMP. The District implements the WQIP in collaboration with other local agencies that have jurisdiction within the San Diego Bay Watershed Management Area, which comprises three HUs: Pueblo San Diego, Sweetwater, and Otay. Note that the Sweetwater HU is located outside of the proposed PMPU area.

San Diego Unified Port District Jurisdictional Runoff Management Program

Under the Municipal Stormwater Permit, each jurisdiction is required to have a JRMP. In addition, each co-permittee prepares and submits an annual report that describes program implementation and strategies to reduce the discharge of pollutants of concern to the MS4 and receiving waters to the maximum extent practicable.

The District’s JRMP has been developed to meet the conditions of the Municipal Stormwater Permit and to assist the District in achieving the goals identified in the WQIP. District-specific WQIP-based strategies have been incorporated into the JRMP. The JRMP’s focus is on controlling stormwater discharges to the MS4, with the overall goal of achieving improvements in receiving water quality. The District has developed a list of BMPs that are applicable to all persons, activities, and operations occurring on District Tidelands, and the JRMP utilizes District-specific jurisdictional activities and watershed-based strategies. Enforcement of the JRMP helps to prevent stormwater pollutants from entering local storm drains and, ultimately, San Diego Bay.

As part of the District’s JRMP, a *BMP Design Manual* was developed to provide guidelines for incorporating permanent post-construction BMPs into new and redevelopment projects. The *BMP*

Design Manual identifies the required source-control and site-design BMPs to eliminate or reduce pollutants in stormwater runoff for all projects. For Priority Development Projects (PDPs), the *BMP Design Manual* also describes pollutant-control BMPs that must be incorporated into the site design and, where applicable, addresses potential hydromodification impacts from changes in flow and sediment supply. The *BMP Design Manual* is applicable for both tenant- and District-sponsored major maintenance or capital improvement projects, as required by the Municipal Stormwater Permit.

Moreover, the Municipal Stormwater Permit (Provision E.4) requires the District to implement a Construction Management program in accordance with the strategies in the San Diego Bay Watershed WQIP in addition to core permit requirements. The core permit requirements include a project approval process that ensures appropriate BMPs are attached to conditions of approval for construction projects as well as ongoing construction site inventory updates and tracking and inspection. In addition, the District is required to establish minimum BMPs that include the following categories: Project Planning, Non-Stormwater Management, Good Housekeeping/Waste Management, Erosion Control, Sediment Control, and Run-on and Run-off Control.

If a project is not subject to the Construction General Permit (Order 2009-0009-DWQ, as amended by Order 2010-0014-DWQ and Order 2012-006-DWQ), a Construction BMP Plan is required pursuant to the JRMP. The Construction BMP Plan includes many of the same elements as a standard SWPPP except for most post-construction BMPs and a monitoring plan. The Construction BMP Plan applies to construction projects with less than 1 acre, but greater than 100 square feet of land disturbance, as well as construction projects that occur over water. District approval is required on all SWPPPs and Construction BMP Plans prior to any work beginning on a project.

San Diego Unified Port District Code, Article 10

District Code, Article 10—the San Diego Unified Port District Stormwater Management and Discharge Control Ordinance—prohibits the deposit or discharge of any chemicals or waste into the Tidelands or San Diego Bay, and makes it unlawful to discharge pollutants directly into the non-stormwater, or indirectly into the stormwater, conveyance system. Article 10 also requires the implementation of BMPs, stormwater plans, and other measures, as appropriate to control the discharge of pollution to Tideland or receiving waters. Where enforcement is required to maintain compliance, the District will use its enforcement authority established by Article 10. Article 10 of the code enables the District, including District inspectors, to prohibit discharges and require BMPs, so that discharges on Tidelands do not cause or contribute to water quality problems. Article 10 establishes enforcement procedures to ensure that responsible dischargers are held accountable.

4.5.4 Project Impact Analysis

4.5.4.1 Methodology

The following impact analysis evaluates the potential effects on geology and soils that could occur from future development under the proposed PMPU. The methodology considers the existing geologic and soil conditions established in Section 4.5.2, *Existing Conditions*, and the applicable laws and regulations pertaining to geologic hazards and soils described in Section 4.5.3, *Laws, Regulations, Plans, and Policies*, in order to determine the proposed PMPU's potential to directly or

indirectly cause substantial adverse effects related to a hazardous geologic condition or event. Information in this analysis is based on Ninyo & Moore's *EIR Level Geology and Soils Evaluation for the Integrated Planning Port Master Plan Update* dated June 2017 (Appendix F).

Except for a few situations identified in the State CEQA Guidelines, CEQA documents are not required to analyze the potential impact of the environment on a proposed project, including any residents or users that a project may introduce to an existing environmental condition, unless a proposed project, by developing in an area with a known hazardous environmental condition, may directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, by exacerbating the existing environmental condition. An example of a project directly or indirectly causing adverse effects by exacerbating existing geologic hazards and soil conditions would be one that includes grading into a hillside that is prone to land or mudslides. In this example, because the project would directly influence the likelihood of such an action occurring, the conclusion is that the project would cause potential substantial adverse effects. On the other hand, if the project would build near the hillside, but would not actually cause a modification to it such that the potential to experience a hazardous event is not increased, then the project would not be found to cause substantial adverse effects, even when considering that by bringing new residents or users to the area, it may place more people and structures in harm's way. Therefore, the analysis below applies this same approach.

The impact analysis is organized first by identifying any proposed policies or standards that would assist with avoiding, eliminating, or reducing any impact associated with geology and soils. The analysis then considers the potential geology and soils impacts from the planned improvements and future allowable development consistent with the water and land use designations under the PMPU. Finally, the analysis considers any policies or standards that may cause or contribute to any related geology and soils impact.

To avoid redundancy in the analysis and present a concise discussion, the analysis discusses the planning districts collectively, as appropriate. In the case that a planning district has unique or special existing conditions and/or may result in one or more unique significant impacts with mitigation specific to that planning district, the analysis presents a separate discussion of that planning district.

4.5.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining the significance of geology and soils impacts from the implementation of the proposed PMPU. The determination of whether a geology and soils impact would be significant is based on the thresholds described below and the professional judgment of the District as Lead Agency, based on the evidence in the administrative record.

Impacts are considered significant if the proposed PMPU would result in any of the following.

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42); (ii) strong seismic ground shaking; (iii) seismic-related ground failure, including liquefaction; (iv) landslides.

2. Substantial soil erosion or the loss of topsoil.
3. A geologic unit or soil becoming unstable and exacerbate the potential of onsite or offsite lateral spreading, subsidence, or collapse.
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
5. Soils that would be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater such that the potential for a hazardous condition would be exacerbated.
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As discussed in the Initial Study/Environmental Checklist (Appendix A), thresholds 1 (iv) and 5 are not included in the analysis below, as the proposed PMPU would not result in significant impacts related to landslides and wastewater disposal systems. Those conclusions are summarized in Chapter 5, Section 5.4, *Effects Found Not to Be Significant*. Therefore, only thresholds 1 (i through iii), 2, 3, 4, and 6 are discussed in the impact analysis below.

Supplemental Thresholds for Paleontological Resources

To assist in determining the significance of paleontological resources impacts, this Program Environmental Impact Report (PEIR) relies on the City of San Diego's CEQA Significance Determination Thresholds for paleontological resources. An answer in the affirmative to either of these questions would indicate a significant paleontological resources impact would occur and mitigation would be required.

Would the project:

1. Require over 1,000 cubic yards of excavation and over 10 feet deep in an area considered to have high paleontological sensitivity?
2. Require over 2,000 cubic yards of excavation and over 10 feet deep in an area considered to have moderate paleontological sensitivity?

The City of San Diego's Thresholds were developed based on consultation with experts from the San Diego Natural History Museum who have detailed knowledge of the location of paleontological resources within the San Diego County region. These thresholds provide quantitative metrics for distinguishing between paleontological resources impacts that are significant (i.e., impact exceeds the quantitative threshold of significance) and those that are typically less than significant. If an impact exceeds the quantitative threshold of significance, mitigation measures are required. No construction monitoring for paleontological resources is required in areas with no or low paleontological sensitivity.

4.5.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policy would have the potential to avoid or reduce impacts associated with geology and soils and is considered in the impact analysis that follows.

SR Policy 1.1.6. Permittees of development that lies within, or partially within, a designated Earthquake Fault Zone shall:

- a. Comply with the seismic safety standards of all applicable seismic provisions and criteria in the most recent version of California State and applicable municipal codes; and
- b. Incorporate siting and design techniques to address any such geologic hazards.

4.5.4.4 Project Impacts and Mitigation Measures

Threshold 1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)

ii. strong seismic ground shaking; or

iii. seismic-related ground failure, including liquefaction?

Impact Analysis

Construction

The PMPU serves as a long-term planning blueprint for future development on District Tidelands. Although the proposed PMPU would not directly result in construction, it would provide planned improvements, allowable water and land uses, and guidance for future development through its proposed planning policies and standards. The primary water and land uses proposed for the PMPU area would not result directly in construction; however, they would allow for, with issuance of a Coastal Development Permit of California Coastal Act exclusion and other real estate documents, where applicable, the future construction of development that would be compatible with the proposed designations and abide by the goals, objectives, policies, and development standards set forth in the proposed PMPU.

As described in Section 4.5.2.2, *Geologic Hazards*, under *Faulting and Seismicity*, the proposed PMPU area contains several faults, including the Rose Canyon Fault, Point Loma Fault Zone, and the La Nacion Fault Zone, which have been mapped approximately 2 miles to the east. Furthermore, a fault was recently discovered within PD3 that transects the existing Seaport Village development. The PMPU area is within an Alquist-Priolo Fault Zone and the Downtown Special Fault Zone, and there is potential for ground rupture due to faulting. Other hazards related to seismic activity associated with nearby faults are strong ground motion, liquefaction, lateral spreading, and seismically induced settlement. Based on the granular nature of the subsurface materials, the shallow depth to groundwater, and proximity to the Bay and Pacific Ocean, the entire PMPU area has a high potential for liquefaction and seismically induced settlement (Appendix F).

Under CEQA, if a project would directly or indirectly cause potential substantial adverse effects, the project would potentially result in a significant impact. All future development under the proposed PMPU would be required to comply with all applicable laws and regulations, including the building

codes identified in Section 4.5.3 above. Chapter 3, *Project Description*, provides a complete list of the allowable primary and secondary uses within PD1, PD2, PD3, PD4, PD7, PD8, PD9, and PD10. The tables provided in Chapter 3 also identify future development that could occur in these planning districts by 2050, the planning horizon for the proposed PMPU. The following sections analyze the potential impacts by planning district.

Planning District 1: Shelter Island

Planning District 1 is mapped within hazard categories 12, 31, 52, and 53, as shown on Figure 4.5-9. Hazard category 12, a *potentially active, inactive, presumed inactive, or activity unknown* fault zone is mapped in the southwest portion of PD1. Most of the planning district is mapped within hazard category 31, which is defined as having a high potential for liquefaction. Hazard category 52, defined as *other level areas, gently sloping to steep terrain with favorable geologic structure, low risk*, is mapped within PD1 near Scott Street. Hazard category 53, defined as *level or sloping terrain, unfavorable geologic structure, low to moderate risk*, is mapped near Bessemer Path. Additionally, a strand of the northwest-to-southeast trending Point Loma Fault Zone, considered to be potentially active, has been mapped in the western portion of the planning district, and an unnamed segment intersects PD1. As such, construction of any potential primary and secondary uses in PD1, as listed in Table 3-4 in Chapter 3, would have a high potential to occur within areas mapped with geologic hazards.

Planning District 2: Harbor Island

Planning District 2 is mapped within hazard categories 11, 12, and 31, as shown on Figure 4.5-10. Hazard category 11, which is defined as an active, Alquist-Priolo Fault Zone, is mapped in the eastern portion of Harbor Island and extends north to Harbor Drive. Hazard category 12, which is defined as a *potentially active, inactive, presumed inactive, or activity unknown* fault zone, is mapped in the eastern portion of Harbor Island and the eastern portion of the San Diego International Airport. According to the California Geological Survey Earthquake Fault Zone Map for the Point Loma Quadrangle, active fault segments associated with the Rose Canyon Fault Zone are mapped within PD2. The entirety of the planning district is mapped as hazard category 31, defined as having a high potential for liquefaction, with shallow groundwater, major drainages, and hydraulic fills. As such, construction of any potential primary and secondary uses in PD2, as listed in Table 3-5 in Chapter 3, would have a high potential to occur within areas mapped with geologic hazards.

Planning District 3: Embarcadero

Planning District 3 is mapped within hazard categories 12, 13, and 31, as shown on Figure 4.5-11. Hazard category 12 is mapped in the southern portion of the planning district and extends towards Embarcadero Marina Park North. Hazard category 13, *Downtown Special Fault Zone*, is mapped in the eastern and northern portions of the planning district that abut Pacific Highway and Harbor Drive. The majority of the planning district is mapped as hazard category 31. As such, construction of many of the potential primary and secondary uses in PD3, as listed in Table 3-6 in Chapter 3, would have a high potential to occur within areas mapped with geologic hazards.

Planning District 4: Working Waterfront

Planning District 4 is mapped within hazard categories 11, 13, and 31, as shown on Figure 4.5-12. Hazard category 11 is mapped in the eastern portion of the Tenth Avenue Marine Terminal and extends nearly to the Coronado Bridge. Hazard category 13 is mapped in the northern portions of

the planning district that abut Harbor Drive. The majority of PD4 is mapped as hazard category 31. According to the California Geological Survey Earthquake Fault Zone Map for the Point Loma Quadrangle, active fault segments associated with the Rose Canyon Fault Zone are mapped within PD4. As such, construction of any potential primary and secondary uses in PD4, as listed in Table 3-8 in Chapter 3, would have a high potential to occur within areas mapped with geologic hazards.

Planning District 7: South Bay

Planning District 7 is mapped within hazard categories 31 and 52, as shown on Figure 4.5-12. The majority of PD7 is mapped as hazard category 31, while hazard category 52 is mapped near the southeastern boundary. However, future development in PD7 would be minimal and would be primarily related to restoration, mitigation banking, aquaculture, and marine technology, as indicated in Table 3-9 in Chapter 3. If construction of physical structures or infrastructure improvements occur, development in PD7 would potentially occur within an area mapped with geologic hazards.

Planning District 8: Imperial Beach Oceanfront

According to the Fault Activity Map of California and the City of Imperial Beach General Plan/ Local Coastal Plan, PD8 is susceptible to strong ground motion and can be expected to have a high potential for liquefaction (Appendix F). As such, construction of any potential primary and secondary uses in PD8, as listed in Table 3-10 in Chapter 3, would have a high potential to occur within areas with known and anticipated geologic hazards.

Planning District 9: Silver Strand

According to the Fault Activity Map of California, PD9 is susceptible to strong ground motion and can be expected to have a high potential for liquefaction (Appendix F). As such, construction of any potential primary and secondary uses in PD9, as listed in Table 3-11 in Chapter 3, would have a high potential to occur within areas with known and anticipated geologic hazards.

Planning District 10: Coronado Bayfront

According to the Fault Activity Map of California and the City of Coronado General Plan, active fault segments associated with the Rose Canyon Fault Zone are mapped within PD10. Planning District 10 is susceptible to strong ground motion and can be expected to have a high potential for liquefaction (Appendix F). As such, construction of any potential primary and secondary uses in PD10, as listed in Table 3-12 in Chapter 3, would have a high potential to occur within areas with known and anticipated geologic hazards.

Construction-Related Impacts

The primary water and land uses proposed for the PMPU area would not result in construction directly; however, the water and land designations would allow for future development of uses that are compatible with the proposed designations and abide by the policies and standards set forth in the proposed PMPU. The allowable secondary water and land uses would generally be compatible with the primary uses and could result in construction involving soil-disturbing activities.

Future development of the primary or secondary water and land uses allowed within any of the planning districts would not directly or indirectly cause potential substantial adverse effects to an active fault because none of the allowable uses would permit activities that could potentially cause a

fault to rupture or slip. As stated above, future development allowed under the proposed PMPU would be required to comply with all applicable laws and regulations, including the building codes identified in Section 4.5.3, and would restrict development within Alquist-Priolo Zones or other areas where active faults are known. All future development would be sited at least 50 feet away from an active fault, in accordance with the Alquist-Priolo Act. Moreover, the proposed PMPU includes SR Policy 1.1.6, which requires compliance with the seismic safety standards of all applicable seismic provisions and criteria in the most recent version of California State and applicable municipal codes and the incorporation of siting and design techniques to address any such geologic hazards. Compliance with these regulations as well as PMPU SR Policy 1.1.6 would preclude construction of future development projects within the proposed PMPU area from occurring within an active fault and cause a fault to rupture or slip. As such, while future development and future users may experience strong seismic ground shaking, either as a result of a fault rupture or simply as a result of being within a seismically active region, mandatory compliance with applicable laws and regulations would ensure that any construction that occurs under the proposed PMPU would not exacerbate existing conditions involving earthquake or strong seismic ground shaking and directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death.

Future construction within the proposed PMPU area would not directly or indirectly cause substantial effects associated with liquefiable soils that are present due to compliance with mandatory regulations described in Section 4.5.3. Construction of future development within the proposed PMPU area would be required to comply with the current seismic design provisions of the CBC. The CBC incorporates the latest seismic design standards for structural loads and materials, as well as provisions from the National Earthquake Hazards Reduction Program, to mitigate losses from an earthquake and provide for the latest in earthquake safety. Additionally, Chapter 18, Soils and Foundations, of the CBC requires the preparation of geotechnical evaluations that include, among other requirements, a record of the soil profile, evaluation of active faults in the area, and recommendations for foundation type and design criteria that address issues, as applicable, such as (but not limited to) bearing capacity of soils and provisions to mitigate the effects of expansive soils, liquefaction, settlement, and varying soil strength. Section 1803.1.1.3 of Chapter 18 states that if a building department, or other appropriate enforcement agency, determines that recommended action(s) presented in the geotechnical evaluations are likely to prevent structural damage, the approved recommended action(s) must be made a condition to the building permit (Section 1803.1.1.3 of Chapter 18). Moreover, construction of future development allowed under the proposed PMPU would be required to adhere to the seismic safety requirements contained in the applicable city municipal code, which are updated periodically to incorporate the current version of the CBC. As such, liquefiable soil conditions would be adequately addressed and mitigated through compliance with the CBC (Chapter 18) and local municipal codes. Impacts associated with the rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (e.g., liquefaction) would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses.

Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction and operation of a Waterfront Destination Park. The implementation of this option would result in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would not directly or indirectly cause potential substantial adverse effects by exacerbating existing conditions related to the potential rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure, including liquefaction, resulting in a less-than-significant impact.

Construction of a Waterfront Destination Park under Option 1 would involve landside ground-disturbing activities. However, construction activities for this option would be required to comply with all applicable laws and regulations, including the building and municipal codes identified in Section 4.3.5 above, to adequately address geologic hazards during construction of Option 1. As such, compliance with existing regulations would ensure that impacts associated with the rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (e.g., liquefaction) would be less than significant. Therefore, construction under Option 1 would not result in any additional or more severe impacts associated with by exacerbating existing conditions related to the potential rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure, including liquefaction than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreation Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would not directly or indirectly cause potential substantial adverse effects by exacerbating existing conditions related to the potential rupture of a known earthquake fault, strong seismic ground

shaking, or seismic-related ground failure, including liquefaction, resulting in a less-than-significant impact.

Construction of additional park space under Option 2 would involve landside ground-disturbing activities, generally the same as those described above. However, construction activities for this option would be required to comply with all applicable laws and regulations, including the building and municipal codes identified in Section 4.3.5 above, to adequately address geologic hazards during construction of Option 2. As such, compliance with existing regulations would ensure that impacts associated with the rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (e.g., liquefaction) would be less than significant. Therefore, construction under Option 2 would not result in any additional or more severe impacts associated with exacerbating existing conditions related to the potential rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure, including liquefaction than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3, *Project Description*.

As discussed above, implementation of the proposed PMPU, including within PD3, would not directly or indirectly cause potential substantial adverse effects by exacerbating existing conditions related to the potential rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure, including liquefaction, resulting in a less-than-significant impact.

Ground-disturbing construction activities would be required for the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, as well as any new park space. However, construction activities for this option would be required to comply with all applicable laws and regulations, including the building and municipal codes identified in Section 4.3.5 above, to adequately address geologic hazards during construction of Option 3. As such, compliance with existing regulations would ensure that impacts associated with the rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (e.g., liquefaction) would be less than significant. Therefore, construction under Option 3 would not result in any additional or more severe impacts associated with exacerbating existing conditions related to the potential rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure, including liquefaction than buildout of the proposed PMPU without Option 3.

Operation

As described in Chapter 3, implementation of the proposed PMPU would result in an increase of Commercial Recreation facilities within PD2, PD3, and PD8, including, but not limited to, hotels,

retail, and other commercial and visitor-serving development. Planning District 4 would primarily comprise marine terminal and marine industrial operations as well as ship building. Planning District 7 is predominately natural habitat, and operations within PD7 would consist of restoration, aquaculture, and habitat mitigation banking. The PMPU could also result in large-scale alterations to the circulation system in order to improve efficiency and reduce traffic (vehicle miles traveled) along the roadways, to provide infrastructure for transit opportunities, provide pedestrians and bicyclists with improved travel routes, and establish mobility hubs to meet the needs of the visitors to the proposed PMPU area. Implementation of the proposed PMPU would also allow for in-water development, including dock maintenance, vessel slip reconfiguration in the water basin, modification of marina capacity, enhancement or modifications to the existing anchorage area supporting transient vessel berthing, and the addition of aquaculture within the proposed PMPU area. Water use designations would include anchorage, commercial fishing berthing, conservation/inter-tidal, industrial and deep-water berthing, marine services berthing, navigation corridor, open bay/water, recreational berthing, and sportfishing berthing. Land use designations would include commercial fishing, commercial recreation, conservation open space, institutional/roadway, marine sales and services, maritime services and industrial, marine terminal, recreation open space, and sportfishing.

The PMPU area is in a region that is susceptible to ground rupture, liquefaction, and strong ground shaking due to seismic activity. All future development would be sited at least 50 feet away from an active fault, in accordance with the Alquist-Priolo Act. As discussed in Section 4.5.3.3, local jurisdictions have adopted the CBC, which requires geotechnical evaluations prior to development (Chapter 18 of the CBC). The geotechnical reports must contain an evaluation of active faults in the area, and recommendations for foundation type and design criteria that address issues as applicable, including seismic shaking and liquefaction. Moreover, none of the potential operational activities of future development associated with the proposed PMPU would have the potential to result in direct or indirect effects by exacerbating existing conditions related to a fault condition leading to a rupture or strong seismic ground shaking. Impacts would be less than significant.

Because future projects developed under the proposed PMPU would be engineered properly in compliance with applicable laws and regulations as required by the CBC, the operation of any development would not have a significant adverse effect on liquefaction. Therefore, impacts from operations related to liquefiable soil conditions would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 are the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction

and operation of a Waterfront Destination Park. The implementation of this option would result in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including PD3, would not directly or indirectly cause potential substantial adverse effects by exacerbating existing conditions related to the potential rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure, including liquefaction, resulting in a less-than-significant impact.

Operation of Option 1 would consist of routine maintenance and upkeep of the Waterfront Destination Park, similar to other existing parks on District Tidelands, and therefore would not include any activities that would have the potential to directly or indirectly cause substantial adverse effects associated with rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (e.g., liquefaction). In addition, future development under this option would be engineered properly in compliance with applicable laws and regulations as required by the CBC and City of San Diego Municipal Code. Therefore, operation of Option 1 would result in less than significant impacts and would not result in any additional or more severe impacts related to exacerbating existing conditions involving known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (e.g., liquefaction) than the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreation Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would not directly or indirectly cause potential substantial adverse effects by exacerbating existing conditions related to the potential rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure, including liquefaction, resulting in a less-than-significant impact.

Operation of Option 2 would consist of routine maintenance and upkeep of the expanded Lane Field Setback Park, similar to other existing parks on District Tidelands, and therefore would not include any activities that would have the potential to directly or indirectly cause substantial adverse effects associated with rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (e.g., liquefaction). In addition, future development under this option would be engineered properly in compliance with applicable laws and regulations as required by the CBC and City of San Diego Municipal Code. Therefore, operation

of Option 2 would result in less-than-significant impacts and would not result in any additional or more severe impacts by exacerbating existing conditions related to known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (e.g., liquefaction) than the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would not directly or indirectly cause potential substantial adverse effects by exacerbating existing conditions related to the potential rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure, including liquefaction, resulting in a less-than-significant impact.

Operation of Option 3 would consist of routine maintenance and upkeep of the additional park space added under this option, similar to other existing parks on District Tidelands, and therefore would not include any activities that would have the potential to directly or indirectly cause substantial adverse effects associated with rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (e.g., liquefaction). In addition, future development under this option would be engineered properly in compliance with applicable laws and regulations as required by the CBC and City of San Diego Municipal Code. Therefore, operation of Option 3 would result in less-than-significant impacts and would not result in any additional or more severe impacts by exacerbating existing conditions related to known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (e.g., liquefaction) than the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

The proposed PMPU does not include any policies that would directly or indirectly cause substantial adverse effects from the rupture of a known earthquake fault; strong seismic ground shaking; or seismic-related ground failure, including liquefaction. Therefore, no significant impacts would occur.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not directly or indirectly cause potential substantial adverse effects by exacerbating existing conditions related to the potential rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure, including liquefaction. Impacts would be less than significant, and no mitigation is required.

Threshold 2: Result in substantial soil erosion or the loss of topsoil?**Impact Analysis****Construction**

The water and land use designations proposed by the PMPU would allow for the future construction of a variety of uses, including, but not limited to, commercial and retail shops, recreational facilities, maritime industrial and cruise improvements, marine terminal support infrastructure, in-water piers and docks, hotels, and other visitor-serving development. Although the proposed PMPU area is primarily developed, soil-disturbing activities associated with future development, such as grading and excavation, could result in soil erosion.

As discussed in Section 4.5.2.5, *Soil Conditions*, the soil types mapped within the proposed PMPU area were identified using the USDA Soil Survey. A summary of the mapped soil types within each planning district and their erosion potential is provided in Table 4.5-3.

Given the onsite soil conditions (i.e., potential for erosion in areas) and future development through 2050, the potential exists for substantial soil erosion or loss of topsoil from the construction and grading activities of future projects. However, compliance with the existing regulatory framework for the prevention of soil erosion and sedimentation from exposed soils would reduce any potentially significant impact related to erosion.

As discussed under Section 4.5.3 and detailed further in Section 4.8, *Hydrology and Water Quality*, construction activities associated with future development that would disturb 1 acre or more of land would be required to comply with the NPDES Construction General Permit adopted by the SWRCB. Compliance with the Construction General Permit requires each qualifying development project to file a Notice of Intent with the SWRCB. Permit conditions require the preparation and implementation of a SWPPP, which must describe the site, the facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls. Inspection of construction sites before and after storms is also required to identify stormwater discharge from the construction activity and to identify and implement erosion controls, where necessary. Additionally, future projects that would disturb less than 1 acre are required to prepare and implement a Water Pollution Control Plan. These plans would identify BMPs to address erosion and sedimentation at the project site during construction activities. Additionally, as discussed in Section 4.8, construction activities associated with future development would be required to comply with District Code, Article 10—the San Diego Unified Port District Stormwater Management and Discharge Control Ordinance. Temporary BMPs, such as silt fences, straw wattles, sediment traps, gravel sandbag barriers, or other effective BMPs, would be required to control runoff and erosion during construction activities.

Implementation of erosion and sediment control BMPs would prevent substantial soil erosion and sedimentation from exposed soils. As discussed in Section 4.8, future development allowed under the proposed PMPU would be required to comply with the District's Stormwater Management and Discharge Control Ordinance and the JRMP, which include specific requirements for all development and redevelopment activities. Pursuant to the District's JRMP, post-construction BMPs are required for all projects falling under the State's Construction General Permit. Post-construction measures, such as surface drainage design provisions that would recapture and filter runoff prior to irrigation

with proper maintenance practices, would reduce potential soil erosion during operations of the proposed reuse along the project sites.

Furthermore, future development within PD1, PD2, PD3, PD4, and PD7 would be subject to San Diego Municipal Code Section 142.0146: *Erosion, Sedimentation, and Water Pollution Control* (described in detail in Section 4.5.3.3 above), which requires that all development implement and maintain both temporary and permanent erosion, sedimentation, and water pollution control measures. Additionally, as discussed in Section 4.8, District Code, Article 10 requires the implementation and maintenance of BMPs, stormwater plans, and other measures, as appropriate to control the discharge of pollution to Tideland or receiving waters.

Future development within PD8 would be subject to the Imperial Beach Municipal Code Section 15.54.110: *Lot Grading – Safety Precautions* (described in detail in Section 4.5.3.3), which states that erosion and siltation control shall require temporary or permanent siltation basins, energy dissipaters, or other measures as field conditions warrant, whether or not such measures are a part of approved plans. Future development within PD9 and PD10 would be subject to the City of Coronado Municipal Code, Title 61: *Stormwater and Urban Runoff Management and Discharge Control*. Title 61 mandates the use of BMPs for all dischargers within the City of Coronado to prevent erosion and sediment discharges.

As such, there are existing laws and regulations that help to ensure there would be no substantial loss of topsoil or erosion. Adherence to the applicable laws and regulations is mandatory and would ensure that impacts are less than significant and no mitigation would be required.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction and operation of a Waterfront Destination Park. The implementation of this option would result in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would occur in compliance with existing laws and regulations that would ensure a less-than-significant impact related to substantial loss of topsoil or erosion.

Option 1 would involve ground-disturbance during construction of a new Waterfront Destination Park. Due to the presence of soil types with the potential for erosion, it is possible construction under Option 1 could result in soil erosion or loss of topsoil; however, compliance with the existing regulatory framework, including NPDES Construction General Permit, Article 10, the District's JRMP, and City of San Diego Municipal Code Section 142.0146, would ensure that impacts related to soil erosion would be less than significant by requiring implementation of erosion and sediment control BMPs during construction. Therefore, construction activities under Option 1 would not result in any additional or more severe impacts related to substantial loss of topsoil or erosion than the buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreation Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would occur in compliance with existing laws and regulations that would ensure a less-than-significant impact related to substantial loss of topsoil or erosion.

Option 2 would involve ground-disturbing activities during construction of the expanded Lane Field Setback Park that could result in erosion or loss of topsoil; however, all future development would comply with the existing regulatory framework established to prevent erosion, including NPDES Construction General Permit, Article 10, the District's JRMP, and City of San Diego Municipal Code Section 142.0146. Adherence to the applicable laws and regulations is mandatory and would ensure that impacts are less than significant by requiring implementation of erosion and sediment control BMPs during construction, and no mitigation would be required. Therefore, construction activities under Option 2 would not result in any additional or more severe impacts related to substantial loss of topsoil or erosion than the buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would occur in compliance with existing laws and regulations that would ensure a less-than-significant impact related to substantial loss of topsoil or erosion.

Option 3 would involve ground-disturbing activities during construction that could result in erosion or loss of topsoil; however, all future development would comply with the existing regulatory framework established to prevent erosion, including NPDES Construction General Permit, Article 10, the District's JRMP, and City of San Diego Municipal Code Section 142.0146. Adherence to the applicable laws and regulations is mandatory and would ensure that impacts are less than significant by requiring implementation of erosion and sediment control BMPs during construction, and no mitigation would be required. Therefore, construction activities under Option 3 would not result in any additional or more severe impacts related to substantial loss of topsoil or erosion than the buildout of the proposed PMPU without Option 3.

Operation

The operation of proposed planned improvements and allowable development consistent with the water and land use designations under the PMPU, would be similar to operation of water and land uses that currently exist throughout the District as it relates to geology and soils. Soil erosion and loss of topsoil associated with future development allowed under the proposed PMPU would generally occur during construction rather than operation of site-specific projects given the ground-disturbing activities typically associated with construction. Once operational, a project site would generally have been developed with impervious surfaces and/or landscaping, and would have little or no impact on soil erosion and the loss of topsoil. Therefore, operation of such future development would not result in substantial soil erosion or the loss of topsoil, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction and operation of a Waterfront Destination Park. The implementation of this option would result in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As discussed above, operation of the proposed PMPU, including within PD3, would not involve ground-disturbing activities and would result in a less-than-significant impact related to substantial loss of topsoil or erosion.

Operations under Option 1 would not result in soil erosion or loss of topsoil because ground-disturbing activities would generally occur during construction, and the new Waterfront Destination Park would generally be built out with impervious surfaces and/or landscaping during operation with little to no activities that would disturb topsoil. Therefore, impacts associated with operation of Option 1 would be less than significant and would not result in any additional or more severe impacts related to substantial loss of topsoil or erosion than the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreation Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As discussed above, operation of the proposed PMPU, including within PD3, would not involve ground-disturbing activities and would result in a less-than-significant impact related to substantial loss of topsoil or erosion.

Operations under Option 2 would not involve any activities that would result in the potential for erosion or loss of topsoil because ground-disturbing activities would generally occur during construction, and the expanded Lane Field Setback Park would generally be built out during operation with impervious surfaces and/or landscaping, with little to no activities that would disturb topsoil. Therefore, impacts associated with operation of Option 2 would be less than significant and would not result in any additional or more severe impacts related to substantial loss of topsoil or erosion than the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3.

As discussed above, operation of the proposed PMPU, including within PD3, would not involve ground-disturbing activities and would result in a less-than-significant impact related to substantial loss of topsoil or erosion.

Operations under Option 3 would not involve any activities that would result in the potential for erosion or loss of topsoil because ground-disturbing activities would generally occur during construction and the new park space that could be developed under Option 3 would generally be built out during operation with little to no activities that would disturb topsoil. Therefore, impacts associated with operation of Option 3 would be less than significant and would not result in any additional or more severe impacts related to substantial loss of topsoil or erosion than the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

The proposed PMPU does not include any policies that would result in substantial soil erosion or the loss of topsoil. Therefore, impacts would be less than significant.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result in substantial soil erosion or the loss of topsoil. Impacts would be less than significant and no mitigation is required.

Threshold 3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Impact Analysis

Construction

Marine beach deposits and artificial fill layers underlying much of the proposed PMPU area are considered unstable due to their liquefaction potential. Because the potential for liquefaction exists in all of the planning districts, there is also potential for lateral spreading (liquefaction is discussed in detail under *Threshold 1*). Lateral spreading is a secondary seismic effect of liquefaction. Lateral spreading occurs when there is liquefiable soil in the immediate vicinity of a free face, such as a slope. Factors controlling lateral displacement include earthquake magnitude, distance from the earthquake epicenter, thickness of liquefiable soil layer, grain size characteristics, fine contents of the soil, and density of granular deposits, such as sands and gravel.

As discussed under Threshold 1, construction activities associated with future development allowed under the proposed PMPU would not exacerbate the potential for liquefaction due to compliance with mandatory regulations such as Chapter 18 of the CBC and applicable city municipal codes. Consequently, future development projects would also not exacerbate conditions that would promote on- or offsite lateral spreading because they would comply with mandatory regulations that address liquefaction and lateral spreading as a secondary effect of liquefaction. Impacts would be less than significant.

Ground subsidence results from fluid (water or petroleum) extraction from underlying formations, which causes the collapse of pore spaces previously occupied by the removed fluid. The collapse of these pore spaces compacts these underlying formations, leading to a gradual drop in ground surface elevation. Ground subsidence is most often found in areas where large volumetric withdrawals of fluids from underground reservoirs have occurred or are ongoing. Ground shaking from tectonic activity can exacerbate the vertical sinking of land in an area over the withdrawal site. Underlying geologic formations within San Diego County have a low potential of subsidence, and there are no historical records of subsidence events in San Diego County (County of San Diego 2017, USGS 2019).

Future development associated with the proposed PMPU would potentially require dewatering during construction activities involving ground disturbances that extend into groundwater. Materials excavated from below the groundwater table would need to be moisture-conditioned and/or mixed before being reused for structural backfill, consistent with existing regulations pertaining to water quality and grading/foundation support. Dewatering would be temporary, would require appropriate permits, and would not result in the substantial drawdown of groundwater. Future development projects requiring dewatering during construction would be required to comply with the dewatering requirements imposed by the San Diego Regional Water Quality Control Board (RWQCB) general waste discharge requirements for discharges from temporary groundwater extraction and similar waste discharges to San Diego Bay (Order No. R9-2015-0013). To obtain coverage under this order, a discharger must submit a complete Notice of Intent application package to the San Diego RWQCB office at least 60 days before proposed commencement of the discharge. The discharger would be required to maintain compliance with the effluent limitations applicable to the receiving water, as specified in Order No. R9-2015-0013 (refer to Table 8 of the order) (see Section 4.8 for additional details on dewatering). As such, temporary dewatering would not permanently affect groundwater levels, and the proposed PMPU would not exacerbate conditions related to on- or offsite subsidence.

Collapsible soils are subject to changes in volume and settlement due to the introduction of water, which can break down soil grain bonds in dry, low-density, unconsolidated soils, resulting in collapse of the soil. Other mechanisms for soil collapse include the sudden closure of voids in a soil, whereby the sudden decrease in volume results in loss of the soil's internal structure, causing the soil to collapse. The artificial fill material and marine deposits that underlie all of the planning districts, as identified in Table 4.5-2, may be loosely or inadequately compacted, may contain oversized materials unsuitable for reuse in engineered fills, and may contain unsuitable organic or expansive materials and debris that may preclude their use in engineered fills. Future development allowed under the proposed PMPU would be required to be constructed in compliance with mandatory CBC regulations related to unstable soils, which include requirements for specific materials to be used for fill, compaction specifications, dewatering requirements, removal of unsuitable material prior to placing fill, and other soil enhancements for surficial stability. Specifically, Chapter 18, Soils and Foundations, of the CBC requires the preparation of geotechnical evaluations that include, among other requirements, a record of the soil profile and recommendations for foundation type and design criteria that address issues, as applicable, such as (but not limited to) bearing capacity of soils, and provisions to mitigate the effects of expansive soils, liquefaction, settlement, and varying soil strength. Additionally, Chapter 18 of the CBC includes specific requirements for excavation, grading, and fill. Chapter 18 of the CBC requires these to be addressed prior to project construction and are enforced by the local municipality issuing the building permit for the project. Therefore, with mandatory compliance with applicable regulations,

future development projects would not directly or indirectly cause conditions that would result in collapsible or unstable soils on- or offsite. Impacts related to collapsible soils would be less than significant.

Lastly, as described in Section 4.5.2.2, no landslides or indications of deep-seated landsliding were noted underlying the proposed PMPU area. According to the Landslide Hazards maps for the Point Loma, National City, and Imperial Beach Quadrangles (1995), the proposed PMPU area is mapped as being “least susceptible” to landslides (with “most susceptible” being the greatest landslide risk). Additionally, landslides are not anticipated to be a concern based on the relatively flat topography of the proposed PMPU area (Appendix F). As such, construction activities for future development allowed under the proposed PMPU would not have the potential to result in on- or offsite landslides, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction and operation of a Waterfront Destination Park. The implementation of this option would result in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would occur in compliance with applicable regulations that would ensure less-than-significant impacts related to landslide, subsidence, liquefaction, or lateral spreading.

Implementation of Option 1 would occur in areas with the potential for liquefaction or lateral spreading. However, construction activities would comply with mandatory regulations that would prevent future development of Option 1 from exacerbating conditions resulting in liquefaction or lateral spreading. In addition, construction activities under Option 1 could involve dewatering. However, the area has a low potential for subsidence, and all dewatering activities would be done in compliance with State and local regulations that would reduce the potential for subsidence. Future development proposed as part of Option 1 would also be required to be constructed in compliance with mandatory CBC regulations related to unstable soils, which would reduce the potential of future development to indirectly or directly cause conditions that would result in collapse of unstable soils. Lastly, the potential for landslides is low in PD3, where Option 1 would be implemented, and, as such, construction activities would not have the potential to result in on- or offsite landslides. Therefore, construction associated

with Option 1 would result in a less-than-significant impact and would not result in any additional or more severe impacts related to landslide, subsidence, liquefaction, or lateral spreading than the buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreation Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would occur in compliance with applicable regulations that would ensure less-than-significant impacts related to landslide, subsidence, liquefaction, or lateral spreading.

Implementation of Option 2 would occur in areas with the potential for liquefaction or lateral spreading. However, construction activities would comply with mandatory regulations that would prevent future development of Option 2 from exacerbating conditions resulting in liquefaction or lateral spreading. In addition, construction activities under Option 2 could involve dewatering. However, the area has a low potential for subsidence, and all dewatering activities would be done in compliance with State and local regulations that would reduce the potential for subsidence. Construction activities associated with the implementation of Option 2 would comply with mandatory CBC regulations that would reduce the potential for liquefaction and lateral spread, subsidence, and collapse. Option 2 would also not be located in an area that has a high potential for landslides, and therefore would not result in direct or indirect effects that could result in on- or offsite landslides. Therefore, construction associated with Option 2 would result in a less-than-significant impact and would not result in any additional or more severe impacts related to landslide, subsidence, liquefaction, or lateral spreading than the buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would occur in compliance with applicable regulations that would ensure less-than-significant impacts related to landslide, subsidence, liquefaction, or lateral spreading.

Implementation of Option 3 would occur in areas with the potential for liquefaction or lateral spreading. However, construction activities would comply with mandatory regulations that would prevent future development of Option 3 from exacerbating conditions resulting in liquefaction or lateral spreading. In addition, construction activities under Option 3 could involve dewatering. However, the area has a low potential for subsidence, and all dewatering activities would be done in compliance with State and local regulations that would reduce the potential for subsidence. Construction activities associated with the implementation of Option 3 would comply with mandatory CBC regulations that would reduce the potential for liquefaction and lateral spread, subsidence, and collapse. Option 3 would also not be located in an area that has a high potential for landslides, and therefore would not result in direct or indirect effects that could result in on- or offsite landslides. Therefore, construction associated with Option 3 would result in a less-than-significant impact and would not result in any additional or more severe impacts related to landslide, subsidence, liquefaction, or lateral spreading than the buildout of the proposed PMPU without Option 3.

Operation

The operation of proposed planned improvements and allowable development consistent with the water and land use designations under the PMPU, would be similar to operations of existing water and land uses that operate throughout the District as it relates to geology and soils. Operational activities associated with future development would not have the potential to directly or indirectly cause on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. Future development would be required to perform site-specific geologic studies in accordance with Chapter 18 of the CBC and local municipal codes, and would be sited on engineered soils that would be required by applicable regulations to be stable and satisfactory for structural foundations. As such, these geologic hazards would be addressed during the design phase of future development projects. Thus, future operations would not involve soil-disturbing activities on unstable soils, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction and operation of a Waterfront Destination Park. The implementation of this option would result

in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would occur in compliance with applicable regulations that would ensure less-than-significant impacts related to landslide, subsidence, liquefaction, or lateral spreading.

Operations under Option 1 would be similar to current operations in PD3 as it relates to geology and soils. Geologic hazards would be addressed during the design phase of future development projects, and construction would occur in compliance with applicable regulation. Operational activities would not have the potential to indirectly or directly cause on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, operational impacts under Option 1 would be less than significant and would not result in any additional or more severe impacts related to landslide, subsidence, liquefaction, or lateral spreading than the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreation Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would occur in compliance with applicable regulations that would ensure less-than-significant impacts related to landslide, subsidence, liquefaction, or lateral spreading.

Operations under Option 2 would be similar to current operations in PD3 as it relates to geology and soils. Geologic hazards would be addressed during the design phase of future development projects, and construction would occur in compliance with applicable regulation. Operational activities would not have the potential to indirectly or directly cause on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, operational impacts under Option 2 would be less than significant and would not result in any additional or more severe impacts related to landslide, subsidence, liquefaction, or lateral spreading than PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation

of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU, including within PD3, would occur in compliance with applicable regulations that would ensure less-than-significant impacts related to landslide, subsidence, liquefaction, or lateral spreading.

Operations under Option 3 would be similar to current operations in PD3 as it relates to geology and soils. Geologic hazards would be addressed during the design phase of future development projects, and construction would occur in compliance with applicable regulation. Operational activities would not have the potential to indirectly or directly cause on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, operational impacts under Option 3 would be less than significant and would not result in any additional or more severe impacts related to landslide, subsidence, liquefaction, or lateral spreading than PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

The proposed PMPU does not include any policies that would result in potential substantial adverse effects, including on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse, from being located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project. Therefore, impacts would be less than significant.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse from being located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project. Therefore, impacts would be less than significant, and no mitigation is required.

Threshold 4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Impact Analysis

Construction

The water and land use designations proposed by the PMPU would allow for the construction of commercial and retail shops, recreational facilities, marine terminal support infrastructure, in-water piers and docks, hotels, and other visitor-serving development. Although the proposed PMPU area is primarily developed, soil-disturbing activities, such as grading and excavation, could occur on expansive soils.

Expansive soils are fine-grained soils (generally high-plasticity clays) that can undergo a significant increase in volume with an increase in water content, as well as a significant decrease in volume

with a decrease in water content. Changes in the water content of highly expansive soils can result in severe distress for structures constructed on or against the soils. Table 18-1-B of the Uniform Building Code illustrates a classification for expansive soils utilizing an expansion index and the associated potential for expansion. For example, an expansion index of 0–20 has a very low potential for expansion, while an expansion index of 91–130 has a high potential for expansion. As discussed in Section 4.5.2.5, *Soil Conditions*, clayey fill soils, alluvium, marine deposits, or old paralic deposits may be moderately expansive. It is anticipated that expansive soils are present throughout the proposed PMPU area.

As shown in Table 4.5-3, soils in PD1, PD2, PD3, PD4, and PD10 have variable potential for expansion. Soils in PD7 have both low and high expansion potential. Planning District 8 includes Coastal beaches and Marina loamy coarse sand, which have low expansion potential. Tidal flats are also identified within PD8, which have high expansion potential. Soils in PD9 consist of Tidal flats, which have high expansion potential, and Carlsbad gravelly loamy sand, Coastal beaches, and Marina loamy coarse sand, each of which have low expansion potential. Finally, soils in PD10 include Coastal beaches and Marina loamy coarse sand (low expansion potential) and made land (variable expansion potential).

The PMPU would not result directly in construction. However, the water and land use designations; listing of appealable projects; and the goals, objectives, and policies of the proposed PMPU would allow for future development of uses that are compatible with the proposed designations and abide by the goals, objectives, policies, and development standards set forth in the proposed PMPU. Construction of future development could occur on soils with the potential to expand. As with any new development within the state, building design and construction of future development within the planning districts would be required to comply with the current structural design provisions of Part 2, Volume 2, Chapter 18, Soils and Foundations, of the CBC, which are enforced by the local municipalities during the building permit process. Building codes provide minimum standards regulating a number of aspects of construction that are relevant to geology and geologic hazards. These include excavation, grading, and fill placement; foundations; and mitigation of soil conditions such as expansive soils. Additionally, construction would be required to adhere to the applicable city's municipal code, which would identify earthwork activity restrictions. As discussed in detail in Section 4.5.3.3, Chapter 14, Article 2, Division 1 of the San Diego Municipal Code; Chapter 14, Article 2, Division 1 of the City of Coronado Municipal Code; and Title 15, Chapter 15.54 of the City of Imperial Beach Municipal Code contain specific grading requirements for construction projects. Moreover, geotechnical studies are required by and, per the above-referenced local municipal codes building permit applicants are required to demonstrate compliance with, Chapter 18 of the CBC and local municipal codes to ensure soils are properly engineered and building foundations are properly designed. Therefore, because building design and construction of future development would be required to comply with the applicable regulations, the proposed project would not cause a potential direct or indirect risk to life or property from being located on expansive soil. Therefore, impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses.

Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction and operation of a Waterfront Destination Park. The implementation of this option would result in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As described above, implementation of the proposed PMPU, including within PD3, would occur in compliance with applicable regulations that would ensure less-than-significant impacts associated with potential direct or indirect risk to life or property from being located on expansive soil.

Expansive soils may be present in PD3 and implementation of Option 1 could result in construction of the proposed Waterfront Destination Park on soils with the potential to expand. Option 1 construction activities would be required to comply with the CBC and Chapter 14, Article 2, Division 1 of the San Diego Municipal Code as they apply to excavation, grading, fill placement, foundations, and mitigation of soil conditions such as expansive soils. Additionally, geotechnical studies are required per the City of San Diego Municipal Code to ensure proper engineering of soils and building foundations are properly designed. Construction of the Waterfront Destination Park under Option 1 would be required to comply with applicable regulations, and would not result in a potential direct or indirect risk to life or property from being located on expansive soils, and impacts would be less than significant. Therefore, Option 1 would not result in any additional or more severe impacts related to expansive soils than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreation Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As described above, implementation of the proposed PMPU, including within PD3, would occur in compliance with applicable regulations that would ensure less-than-significant impacts associated with potential direct or indirect risk to life or property from being located on expansive soil.

Expansive soils may be present in PD3 and construction of the expanded Lane Field Setback Park under Option 2 could result in construction on soils with the potential to expand. Future development would be required to comply with the CBC and Chapter 14, Article 2, Division 1 of the San Diego Municipal Code as they apply to excavation, grading, fill placement, foundations, and mitigation of soil conditions such as expansive soils. Additionally, geotechnical studies are required per the City of San Diego Municipal Code to ensure proper engineering of soils and building foundations are properly designed. Construction associated with Option 2 would be required to comply with applicable regulations, and would not result in a potential direct or indirect risk to life or property from being located on expansive soils, and impacts would be less than significant. Therefore, Option 2 would not result in any additional or more severe impacts related to expansive soils than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of construction activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3.

As described above, implementation of the proposed PMPU, including within PD3, would occur in compliance with applicable regulations that would ensure less-than-significant impacts associated with potential direct or indirect risk to life or property from being located on expansive soil.

Expansive soils may be present in PD3 and construction of the new park space that could be developed under Option 3 could result in construction on soils with the potential to expand. Construction activities would be performed in compliance with the CBC and Chapter 14, Article 2, Division 1 of the San Diego Municipal Code as they apply to excavation, grading, fill placement, foundations, and mitigation of soil conditions such as expansive soils. Additionally, geotechnical studies are required per the City of San Diego Municipal Code to ensure proper engineering of soils and building foundations are properly designed. Construction associated with Option 3 would be required to comply with applicable regulations, and would not result in a potential direct or indirect risk to life or property from being located on expansive soils, and impacts would be less than significant. Therefore, Option 3 would not result in any additional or more severe impacts related to expansive soils than buildout of the proposed PMPU without Option 3.

Operation

The operation of proposed planned improvements and allowable development consistent with the water and land use designations under the PMPU, would be similar to operation of existing water and land uses that operate throughout the District as it relates to geology and soils impacts. Operational activities associated with future development consistent with the proposed primary and secondary water and land uses would not have the potential to cause conditions that would potentially result in hazards from expansive soils. Typically, the type of activities that have the

potential to impact expansive soils are those that occur during construction. As such, while this development would potentially bring additional people to District Tidelands, mandatory compliance with existing regulatory requirements such as the CBC and applicable city municipal codes would ensure that operation of future development would not create substantial direct or indirect risks to life or property, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would comply with applicable regulations during project design and construction and would not involve ground-disturbing activities during operation. Thus, implementation of the proposed PMPU would result in less-than-significant impacts related to direct or indirect risk to life or property due to being located on expansive soils.

Operation of the new Waterfront Destination Park under Option 1 would not involve ground-disturbing activities that typically have the potential to impact expansive soils. Therefore, operation of Option 1 would result in less-than-significant impacts and would not result in any additional or more severe impacts associated with being located on expansive soils than the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would comply with applicable regulations during project design and construction and would not involve ground-disturbing activities during operation. Thus, implementation of the proposed PMPU would result in less-than-significant impacts related to direct or indirect risk to life or property due to being located on expansive soils.

Operation of the expanded Lane Field Setback Park under Option 2 would not include any ground-disturbing activities that would typically result in an impact on expansive soils. Typically, the type of activities that have the potential to impact expansive soils are those that occur during construction. Therefore, operation of Option 2 would result in less-than-significant impacts and would not result in any additional or more severe impacts associated with being located on expansive soils than the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would comply with applicable regulations during project design and construction and would not involve ground-disturbing activities during operation. Thus, implementation of the proposed PMPU would result in less-than-significant impacts related to direct or indirect risk to life or property due to being located on expansive soils.

Operation of the new park space that could be developed under Option 3 would not include any ground-disturbing activities that would typically result in an impact on expansive soils. Typically, the type of activities that have the potential to impact expansive soils are those that occur during construction. Therefore, operation of Option 3 would result in less-than-significant impacts and would not result in any additional or more severe impacts associated with being located on expansive soils than the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

The proposed PMPU does not include any policies that would result in potential impacts associated with expansive soil. Therefore, impacts would be less than significant.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result substantial adverse effects from being located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property. Therefore, impacts would be less than significant.

Threshold 6: Directly or indirectly destroy a unique paleontological resource or site or a unique geological feature?

Impact Analysis

Construction

Chapter 3 provides a complete list of the allowable primary and secondary uses and identifies future development that could occur in PD1, PD2, PD3, PD4, PD7, PD8, PD9, and PD10 by 2050.

The primary type of activities that directly destroy a unique paleontological resource or site are ground-disturbing activities. As presented above in Table 4.5-4 of Section 4.5.2.6, *Unique Paleontological Resources and Geologic Features*, each planning district contains several geologic units, which have differing levels of sensitivity. All planning districts contain at least one geologic formation with low or no paleontological sensitivity, and none of the planning districts contain geologic formations with moderate paleontological sensitivity. However, PD1, PD3, PD8, PD9, and PD10 contain Bay Point Formation, a geologic formation that has high paleontological sensitivity. Additionally, six fossil localities have been identified within two planning districts: one in PD4 and five in PD10. As such, per the City of San Diego's CEQA Significance Determination Thresholds, which were developed based on consultation with experts from the San Diego Natural History Museum, construction activities in areas underlain by Bay Point Formation have the potential to cause significant direct impacts on paleontological resources or sites when they require over 1,000 cubic yards of excavation and depth of excavation exceeding 10 feet, or require any amount of grading on a fossil recovery site or within 100 feet of a mapped fossil recovery site.

Construction activities for future PMPU-related development have the potential to require 1,000 cubic yards or more of excavation exceeding depths of 10 feet in areas of PD1, PD3, PD8, PD9, and PD10, which are underlain by Bay Point Formation. Construction in PD4 and PD10 could entail grading on a fossil recovery site or within 100 feet of a mapped fossil recovery site. Therefore, the proposed PMPU has the potential to result in future construction activities in PD1, PD3, PD8, PD9,

and PD10 that could directly cause significant impacts on unique paleontological resources or sites, and impacts are considered significant (**Impact-GEO-1**). Activities that indirectly destroy unique paleontological resources or sites or unique geologic features typically include creating access to a previously undeveloped area that increases visitation, potentially allowing for rock or fossil hunting, which would not occur during construction activities.

In addition, as noted under Section 4.5.6.2, there are no unique geologic features within the proposed PMPU area and, thus, implementation of the proposed PMPU would not result in any direct or indirect impacts on these resources. Therefore, construction activities would not have the potential to result in indirect impacts on unique geologic features.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, the implementation of the proposed PMPU, including within PD3, would result in a significant impact related to direct significant impacts on unique paleontological resources or sites (**Impact-GEO-1**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside the option boundary within PD3.

Option 1 would include the construction of the Waterfront Destination Park within PD3, which contains Bay Point Formation, a geologic formation that has high paleontological sensitivity, and construction activities for a new Waterfront Destination Park may require 1,000 cubic yards or more of excavation exceeding depths of 10 feet. Thus, construction of Option 1 would result in a significant impact on unique paleontological resources or sites (**Impact-GEO-1**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, the implementation of the proposed PMPU, including within PD3, would result in a significant impact related to direct significant impacts on unique paleontological resources or sites (**Impact-GEO-1**). This significant impact would still occur within PD3 under Option 2 due to future development that could still occur outside the option boundary within PD3.

Construction of the expanded Lane Field Setback Park under Option 2 would be located in PD3, which contains Bay Point Formation, a geologic formation that has high paleontological sensitivity, and construction activities of the new park may require 1,000 cubic yards or more of excavation exceeding depths of 10 feet. Therefore, ground-disturbing construction activities associated with Option 2 would result in a significant impact on unique paleontological

resources or sites (**Impact-GEO-1**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, the implementation of the proposed PMPU, including within PD3, would result in a significant impact related to direct significant impacts on unique paleontological resources or sites (**Impact-GEO-1**). This significant impact would still occur within PD3 under Option 3 due to future development that could still occur outside the option boundary within PD3.

Construction of a new park space that could be developed under Option 3 would be located in PD3, which contains Bay Point Formation, a geologic formation that has high paleontological sensitivity, and construction activities may require 1,000 cubic yards or more of excavation exceeding depths of 10 feet. Ground-disturbing construction activities for this option would be required for the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, as well as any new park space. Therefore, construction of Option 3 would result in a significant impact on unique paleontological resources or sites (**Impact-GEO-1**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Operation

Activities with ground disturbance (i.e., construction activities) have the potential to result in direct impacts on unique paleontological resources or sites and unique geologic features. Future operations associated with allowable primary and secondary water and land uses would not include ground disturbance, and therefore do not have the potential to directly result in the destruction of a unique paleontological resources. In general, activities that indirectly destroy paleontological resources or unique geologic features typically include creating access to a previously undeveloped area that increases visitation, potentially allowing for rock or fossil hunting. Future development under the proposed PMPU would primarily be infill development and would occur in urban areas that do not provide opportunities for rock or fossil hunting. Therefore, no direct or indirect operational impacts on paleontological resources or unique geologic features would occur, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, operation of the proposed PMPU, including within PD3, would not include ground disturbance and would not create access to previously undeveloped areas that could provide opportunities for rock or fossil hunting, and, thus, would not result in direct or indirect operational impacts on paleontological resources or unique geologic features.

Operation of Option 1 would not include ground-disturbing activities; thus, operation of Option 1 would not have the potential to directly result in the destruction of unique paleontological resources. Development of the Waterfront Destination Park under Option 1 would be infill development and would not provide access to unique geologic features; thus, the park would also not result in indirect impacts on unique geologic features. Therefore, operation of Option 1 would result in less-than-significant impacts and would not result in any additional or more severe impacts associated with impacts on paleontological or geologic resources than the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, operation of the proposed PMPU, including within PD3, would not include ground disturbance and would not create access to previously undeveloped areas that could provide opportunities for rock or fossil hunting. Thus, the proposed PMPU would not result in direct or indirect operational impacts on paleontological resources or unique geologic features.

Operation of Option 2 would not include ground-disturbing activities; thus, operation of Option 2 would not have the potential to directly result in the destruction of unique paleontological resources. The expanded Lane Field Setback Park under Option 2 would be infill development and would not provide access to unique geologic features; thus, the park would not result in indirect impacts on unique geologic features. Therefore, operation of Option 2 would result in less-than-significant impacts and would not result in any additional or more severe impacts associated with paleontological or geologic resources than the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, operation of the proposed PMPU, including within PD3, would not include ground disturbance and would not create access to previously undeveloped areas that could provide opportunities for rock or fossil hunting; thus, the proposed PMPU would not result in direct or indirect operational impacts on paleontological resources or unique geologic features.

Operation of Option 3 would not include ground-disturbing activities; thus, operation of Option 3 would not have the potential to directly result in the destruction of unique paleontological resources. The new park space that could be developed under Option 3 would be infill development and would not provide access to unique geologic features; thus, the park would not result in indirect impacts on unique geologic features. Therefore, operation of Option 3 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to paleontological or geologic resources than the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

The proposed PMPU does not include any policies that would result in potential impacts on a unique paleontological resource or site or a unique geological feature. Therefore, impacts would be less than significant.

Impact Determination and Mitigation

Construction activities associated with future development allowed under the proposed PMPU may result in the destruction of a unique paleontological resource or site or unique geologic feature.

Significant Impacts

Impact-GEO-1: Future Construction Activities Within PD1, PD3, PD8, PD9, and PD10 May Adversely Impact Unique Paleontological Resources. Planning Districts 1, 3, 8, 9 and 10 contain areas with the Bay Point Formation, which is known to contain sensitive paleontological resources and is assigned a high paleontological sensitivity. Ground disturbance of more than 1,000 cubic yards at a depth of 10 feet or greater within these locations from future construction activities allowed under the proposed PMPU would have the potential to result in a significant impact on unique paleontological resources or sites.

Mitigation Measures

For **Impact-GEO-1**

MM-GEO-1: Require Paleontological Sensitivity Screening and Monitoring in Areas of Sensitivity. Future development allowed under the proposed PMPU shall be subject to paleontological and geologic resource sensitivity screening as part of the application process for District approval. The paleontological resource sensitivity screening shall examine whether the proposed development would include ground disturbance with the potential to encounter undisturbed soils and whether the development is located on a site (or sites) underlain by Bay Point Formation, and meets one or more of the following conditions: (1) construction would involve ground disturbance of a fossil recovery site or within 100 feet of a mapped fossil recovery site, or (2) construction would require over 1,000 cubic yards of excavation and depth of excavation exceeding 10 feet. If the proposed development meets either or both of the above-stated criteria, the project proponent shall retain a Qualified Paleontologist, approved by the District, who shall conduct paleontological monitoring during all ground-disturbing activities. The paleontological monitoring required by this mitigation measure shall include the following measures:

- The project proponent shall retain a Qualified Paleontologist, approved by the District. A “Qualified Paleontologist” shall be defined as an individual (i) who has a M.S. or Ph.D. in paleontology, or geology, (ii) who also has demonstrated familiarity with paleontological procedures and techniques, (iii) who is knowledgeable in the geology and paleontology of San Diego County, and (iv) who has worked as a paleontological mitigation project supervisor in the County of San Diego for at least 1 year.
- The Qualified Paleontologist shall attend the preconstruction meeting(s) to consult with the grading and excavation contractors or subcontractors concerning excavation schedules, paleontological field techniques, and safety issues.
- The Qualified Paleontologist or Paleontological Monitor shall be on site, on a full-time basis, during ground-disturbing activities that occur 10 feet or more below ground surface, to inspect exposures for contained fossils. The Paleontological Monitor shall work under the direction of the project’s Qualified Paleontologist. A “Paleontological Monitor” shall be

defined as an individual selected by the Qualified Paleontologist who has experience in monitoring excavation and the collection and salvage of fossil materials.

- If fossils are discovered on a development site, the Qualified Paleontologist shall recover them and temporarily direct, divert, or halt grading to allow recovery of fossil remains.
- The Qualified Paleontologist shall be responsible for the cleaning, repairing, sorting, and cataloguing of fossil remains collected during the monitoring and salvage portion of the mitigation.
- The Qualified Paleontologist shall deposit and donate prepared fossils, along with copies of all pertinent field notes, photos, and maps, in a scientific institution with permanent paleontological collections, such as the San Diego Natural History Museum, approved by the District. Curation costs of the fossils shall be paid for by the project proponent.
- Within 30 days after the completion of excavation and pile-driving activities, a final data recovery report shall be completed by the Qualified Paleontologist and submitted to the District for review and approval. The final report shall document the results of the mitigation and shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

Level of Significance After Mitigation

With implementation of **MM-GEO-1**, impacts on unique paleontological resources (**Impact-GEO-1**) would be reduced to a less-than-significant level because future site-specific projects would be required to screen for excavation quantities and paleontological sensitivity. The required monitoring of any ground-disturbing activities and the related paleontological resource recovery procedures would minimize the potential to affect a unique paleontological resource or site.

4.5.5 Cumulative Impact Analysis

A significant cumulative impact on geology and soils would result if the proposed PMPU would contribute to cumulative impacts related to exacerbating the potential for fault rupture, strong seismic ground shaking, ground failure, erosion, unstable soils, lateral spreading, subsidence, liquefaction, collapse, or expansive soils; or to the direct or indirect destruction of a unique paleontological resource or site or a unique geologic feature.

4.5.5.1 Geographic Scope

The geographic scope for cumulative impacts varies for geological resources and depends on the geologic issue. The geographic scope with respect to seismicity includes the proposed PMPU area and extends to adjacent areas, including three adjacent cities: Coronado, Imperial Beach, and San Diego. An earthquake within the cumulative geographic scope could cause substantial damage or injury throughout this area of bay and marine deposits and undocumented fill, which are prone to seismic-related geologic hazards. However, CEQA is concerned with a project's potential to exacerbate an existing environmental condition and, with a few exceptions, does not consider the existing condition's effects on the project to fall within its scope.

Projects that involve ground disturbance in intact, natural landforms have the potential to contribute to cumulative impacts on paleontological resources. The geographic scope with respect to paleontological resources includes the proposed PMPU area and the adjacent area, including the three member cities.

There is no potential for landslides, mudflows, and modification of topography or the direct or indirect destruction of unique geologic features because the proposed PMPU area is not subject to slope instability and contains no unique geologic features.

4.5.5.2 Cumulative Effects From Past, Present, and Probable Future Projects

Table 2-2 in Chapter 2, *Environmental Setting*, includes past, present, and probable future plans and programs in the vicinity of the proposed PMPU area. Future development under each of these plans and programs would potentially remove onsite soils unsuitable for development and replace them with soils that are suitable, as required by applicable engineering regulations (i.e., city grading requirements) and best practices (i.e., recommendations from geotechnical investigations).

Past and present development has increased, and future development will increase, the infrastructure, structural improvements, and number of people working and/or living in the proposed PMPU area and adjacent cities, which has placed, and will continue to place, commercial, industrial, and residential structures, their occupants, and associated infrastructure in areas that are susceptible to seismic events. All the present and probable future projects listed in Table 2-2 would also result in increased infrastructure, structures, and number of people working and/or living in the cumulative geographic scope. However, none of these projects would be capable of exacerbating the potential for a geologic hazard given their limited impact on the area's geologic setting and the requirement to grade and compact soils in accordance with local and State laws, regulations, and standards designed to prevent soil-related geologic hazards from occurring. Consequently, the impacts of past, present, and probable future projects as they relate to exacerbating fault rupture, seismic ground shaking, and liquefaction would be less than cumulatively significant.

Present and probable future projects within the cumulative study area could damage or destroy paleontological resources during construction activities. For paleontological resources, previous historical urban development within the cumulative study area without proper professional assessment and systematic collection of data has resulted in the loss of potentially significant scientific data. More recent development has been carried out under Federal, State, and local regulations, with mitigation of significant impacts on such resources. However, because paleontological resources are non-renewable resources, the direct and indirect impacts of past, present, and probable future projects are cumulatively significant.

While there are no unique geologic features identified in the proposed PMPU area, present and probable future projects could damage or destroy unique geologic features in adjacent areas, which would be considered part of the cumulative study area. Damage could be direct due to construction activity or project design, or could be indirect, related to the creating access to a previously undeveloped area that increases visitation, potentially allowing for rock hunting. Because direct or indirect impacts could occur as a result of implementation of past, present or probable future projects, the impacts would be cumulatively significant.

4.5.5.3 Project Contribution

Geology and Soils

All future development associated with the proposed PMPU would be required to comply with the CBC and the applicable city's municipal code, which requires geotechnical evaluations prior to development (Chapter 18 of the CBC) that must contain an evaluation of active faults in the area, and recommendations for foundation type and design criteria that address issues as applicable, including seismic shaking, settlement, and liquefaction. Section 1803.1.1.3 of Chapter 18 of the CBC states that if a building department, or other appropriate enforcement agency, determines that recommended action(s) presented in the geotechnical evaluations are likely to prevent structural damage, the approved recommended action(s) must be made a condition to the building permit (Section 1803.1.1.3 of Chapter 18). Moreover, construction of future development allowed under the proposed PMPU would be required to adhere to the seismic safety requirements contained in the applicable city municipal code, which are updated periodically to incorporate the current version of the CBC. Compliance with these regulations would ensure that impacts associated with future development allowed under the proposed PMPU that may directly or indirectly cause adverse effects from geologic hazards would be less than significant. When combined with the cumulative projects listed in Table 2-2, which would also be required to comply with the CBC and the applicable city's municipal code, the proposed project's contribution to a cumulative geology and soils impacts would not be cumulatively considerable. For the same reasons Options 1–3 would not be cumulatively considerable.

Unique Paleontological Resources or Sites and Unique Geologic Features

As discussed in Section 4.5.2.6, 112 fossil collection localities are present within a 0.25-mile radius of the proposed PMPU area; six of these are within the proposed PMPU area. Five of the eight planning districts contain geologic units that possess high paleontological sensitivity, and two of the eight are located within 100 feet of a documented fossil locality. Other unknown and unrecorded unique paleontological resources could be located within and adjacent to the proposed PMPU area. Therefore, any ground-disturbing construction activities could impact previously unidentified paleontological resources, resulting in the potential for permanent loss of a paleontological resource of regional or statewide significance. Grading and excavation associated with future construction activities would potentially expose subsurface paleontological resources. Any vertebrate fossils exposed by grading without appropriate professional, systematic recovery would be destroyed, and their ability to be preserved for future study would be lost. Therefore, without mitigation, the project's contribution to cumulative impacts on unique paleontological resources is considered cumulatively considerable for the proposed PMPU and Options 1–3 (**Impact-C-GEO-1**). However, with implementation of **MM-GEO-1**, construction-related impacts on unique paleontological resources would be reduced to a less-than-significant level because future site-specific projects would be required to screen for excavation quantities and paleontological sensitivity. As such, construction of future, site-specific developments allowed under the proposed PMPU would not result in a cumulatively considerable contribution to a significant cumulative impact on paleontological resources with mitigation. In addition, operation of those future projects would not result significant impacts on paleontological resources because operations would not involve ground-disturbing activities. Therefore, the proposed PMPU's contribution to cumulative paleontological resources impacts would not be cumulatively considerable with mitigation.

In addition, as noted under Section 4.5.6.2, there are no unique geologic features within the proposed PMPU area and, therefore, implementation of the proposed PMPU would not result in any direct or indirect impacts on these resources, and the proposed PMPU's contribution would not be cumulatively considerable.

4.5.5.4 Cumulative Impact Determination and Mitigation

Compliance with existing regulations and the implementation of **MM-GEO-1** by future development projects allowed under the proposed PMPU and Options 1–3 for unique paleontological resources or sites would reduce cumulative impacts (**Impact-C-GEO-1**) to a less-than-significant level. Because **MM-GEO-1** would avoid or reduce the loss of unique paleontological resources or sites and unique geologic features, the proposed PMPU's contribution to cumulative impacts would not be cumulatively considerable after mitigation.

Section 4.6

Greenhouse Gas Emissions and Energy

4.6.1 Overview

This section describes the existing conditions and regulatory setting for greenhouse gas (GHG) emissions and analyzes the proposed Port Master Plan Update’s (PMPU’s) consistency with (1) the San Diego Unified Port District’s (District’s) Climate Action Plan (CAP) reduction targets and regulatory programs outlined in the California Climate Change Scoping Plan and adopted by the California Air Resources Board (CARB) or other California agencies to reduce GHG emissions in 2030; and (2) the reduction targets set forth through California Executive Order (EO) S-03-05 and EO B-55-18 and plans, policies, promulgated to reduce GHG emissions post-2030. Additionally, this section describes the existing conditions and regulatory setting for energy systems that serve the proposed PMPU area and analyzes whether implementation of the proposed PMPU would (1) result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; and (2) conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The supporting calculations and modeling of GHG emissions and energy consumption are provided in Appendix C.

Table 4.6-1 summarizes the significant impacts and mitigation measures (MMs) discussed in Section 4.6.4.4, *Project Impacts and Mitigation Measures*.

Table 4.6-1. Summary of Significant Greenhouse Gas Emission Impacts and Mitigation Measures

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-GHG-1: Inconsistency with the Statewide Reduction Target for 2030 (Project-Adjusted) and Goal for 2050	All	Implement MM-AQ-2 and MM-AQ-3 , and MM-AQ-6 through MM-AQ-12 . Implement MM-TRA-1 through MM-TRA-3 . MM-GHG-1: Secure All Electricity from Renewable Sources. MM-GHG-2. Purchase Alternative Fuel, Electric, or Hybrid Vehicles and Equipment	Significant and Unavoidable	Mitigation would reduce PMPU-related GHG emissions and would achieve the efficiency metric; however, because it cannot be stated with certainty that the project would result in emissions that would represent a fair share of the requisite reductions towards the statewide carbon neutrality goal, impacts would

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
				remain significant and unavoidable.
Impact-GHG-2: Conflict with Plans, Policies, and Regulations Adopted to Reduce GHG Emissions	All	Implement MM-AQ-2 and MM-AQ-3, and MM-AQ-6 through MM-AQ-12 . Implement MM-TRA-1 through MM-TRA-3 . Implement MM-GHG-1 and MM-GHG-2 .	Less than Significant	Mitigation would ensure consistency with plans, policies, and regulatory programs.
Impact-EN-1: Potential Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources	All	Implement MM-AQ-2, MM-AQ-3, MM-AQ-6, and MM-AQ-9 through MM-AQ-12 . Implement MM-GHG-1 and MM-GHG-2 .	Less than Significant	Mitigation would reduce construction and operational energy use, and therefore would reduce impacts to less than significant.
Impact-EN-2: Potential Inconsistency with Applicable Energy Use Reduction Plans	All	Implement MM-AQ-9, MM-AQ-10, MM-AQ-11, MM-AQ-12, and MM-GHG-2 .	Less than Significant	Mitigation measures would ensure compliance with renewable energy or energy efficiency plans, and therefore would reduce impacts to less than significant.
Impact-C-GHG-1: Inconsistency with the Statewide Reduction Targets for 2030 and 2050	All	Implement MM-AQ-2 and MM-AQ-3, and MM-AQ-6 through MM-AQ-12 . Implement MM-GHG-1 and MM-GHG-2 .	Less than Cumulatively Considerable	Mitigation would reduce PMPU-related GHG emissions and would achieve the reduction efficiency metric; however, because it cannot be stated with certainty that the project would result in emissions that would represent a fair share of the requisite reductions towards the statewide carbon

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
				neutrality goal, impacts would remain cumulatively considerable and unavoidable
Impact-C-GHG-2: Conflict with Plans, Policies, and Regulations	All	Implement MM-AQ-2 , MM-AQ-3 , and MM-AQ-6 through MM-AQ-12 . Implement MM-GHG-1 and MM-GHG-2 .	Less than Cumulatively Considerable	Mitigation would ensure consistency with plans, policies, and regulatory programs.
Impact-C-EN-1: Potential Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources	All	Implement MM-AQ-2 , MM-AQ-3 , MM-AQ-6 , MM-AQ-9 , MM-AQ-10 , and MM-AQ-12 . Implement MM-GHG-1 and MM-GHG-2 .	Less than Cumulatively Considerable	Mitigation would reduce construction and operational energy use, and therefore would reduce impacts to less than cumulatively considerable.
Impact-C-EN-2: Potential Inconsistency with Applicable Energy Use Reduction Plans	All	Implement MM-AQ-9 through MM-AQ-12 . Implement MM-GHG-2 .	Less than Cumulatively Considerable	Mitigation measures would ensure compliance with renewable energy or energy efficiency plans, and therefore would reduce impacts to less than cumulatively considerable.

4.6.2 Existing Conditions

This section provides a discussion of the existing understanding of global climate change and discusses GHG emissions and sources within the proposed PMPU area. A discussion of the State's energy resource portfolio and the energy utility provider serving the proposed PMPU area is also provided. Section 4.6.2.1 summarizes the effects of climate change globally and within the proposed PMPU area. Section 4.6.2.2 describes principal GHG pollutants of concern. Section 4.6.2.3 summarizes relevant GHG inventories, including the District's. Section 4.6.2.4 summarizes the GHG emissions setting by Planning District. Section 4.6.2.5 describes the State's energy resources and annual consumption by resource sector along with the annual electricity and natural gas supplied by the energy utility provider serving the proposed PMPU area.

4.6.2.1 Climate Change

The process known as the *greenhouse effect* keeps the atmosphere near the Earth's surface warm enough for the successful habitation of humans and other life forms. GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorinated carbons (PFCs), sulfur hexafluoride (SF₆), and hydrofluorocarbons (HFCs), in addition to water vapor. These six gases are also identified as GHGs in Section 15364.5 of the California Environmental Quality Act (CEQA) Guidelines.

Sunlight in the form of infrared, visible, and ultraviolet light passes through the atmosphere. Some of the sunlight striking the Earth is absorbed and converted to heat, which warms the surface. The surface emits infrared radiation to the atmosphere, where some of it is absorbed by GHGs and re-emitted toward the surface. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and amplifying the warming of the Earth (Center for Climate and Energy Solutions 2011).

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels enhance the greenhouse effect, which contributes to global warming of the Earth's lower atmosphere. This warming induces large-scale changes in ocean circulation patterns, precipitation patterns, global ice cover, biological distributions, and other changes to the Earth system that are collectively referred to as *climate change*. Impacts of climate change are felt on a global scale and are expected to manifest in different ways in different locations depending on local and regional factors, such as topography, regional climate, ocean circulation, and land uses. In California, climate change is forecasted to result in the following effects: reduction in water supply and significant loss of snow pack; sea level rise resulting in coastal erosion and seawater intrusion; increased average temperatures including more extreme heat days per year; exacerbation of air quality problems including more high ozone days; increased vulnerability of forests due to pest infestation and higher temperatures; more large forest fires; more drought years; increased challenges for the State's important agricultural industry due to water shortages, increasing temperatures, and saltwater intrusion; increased electricity demand, particularly in the hot summer months; damage to marine ecosystems and the natural environment including acidification of the oceans due to increased CO₂ levels (including coral bleaching); and increased incidences of infectious diseases, asthma, and other human health related problems.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs). Criteria air pollutants and TACs occur locally or regionally, and local concentrations respond to locally implemented control measures. However, the long atmospheric lifetimes of GHGs allow them to be transported great distances from sources and become well mixed, unlike criteria air pollutants, which typically exhibit strong concentration gradients away from point sources. GHGs and global climate change represent cumulative impacts; that is, GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change.

4.6.2.2 Principal Greenhouse Gases

The GHGs listed by the Intergovernmental Panel on Climate Change (IPCC) (CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆) (IPCC 2014) are discussed in this section in order of abundance in the atmosphere, and the principal characteristics surrounding these pollutants are discussed below. California law and the State CEQA Guidelines contain a similar definition of GHGs (Health and Safety Code Section

38505(g); 14 California Code of Regulations Section 15364.5). Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic (human-made) sources. Consequently, the primary GHGs of concern associated with the proposed PMPU are CO₂, CH₄, and N₂O. Note that HFCs, and SF₆, and PFCs are not discussed because those gases are primarily generated by manufacturing processes, which are not anticipated as part of the proposed PMPU.

- **Carbon Dioxide (CO₂)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). CO₂ is also removed from the atmosphere (or “sequestered”) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH₄)** is emitted during the production and transport of coal, natural gas, and oil. CH₄ also results from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- **Nitrous Oxide (N₂O)** is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method to compare GHG emissions is the GWP methodology defined in the IPCC reference documents. IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalent (CO₂e), which compares the gas in question to that of the same mass of CO₂ (which has a GWP of 1 by definition). The GWP values used in this report are based on the IPCC Fourth Assessment Report (AR4) and United Nations Framework Convention on Climate Change reporting guidelines and are defined in Table 4.6-2 (IPCC 2007). The AR4 GWP values are used in CARB’s 2018 California GHG inventory and CARB’s 2017 Scoping Plan Update, as well as in the District’s GHG emissions inventory (CARB 2021a, 2017a; District 2018a). Table 4.6-2 lists the GWP of CO₂, CH₄, and N₂O.

Table 4.6-2. Global Warming Potentials of Key GHGs

Gas	GWP (100 years)
CO ₂	1
CH ₄	25
N ₂ O	298

Sources: CARB 2020b.

GWP = global warming potential; CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide.

All GWPs used for CARB’s GHG inventory and to assess attainment of the State’s reduction targets are considered over a 100-year timeframe (as shown in Table 4.6-2). However, CARB recognizes the importance of short-lived climate pollutants and reducing these emissions to achieve the State’s overall climate change goals. Short-lived climate pollutants have atmospheric lifetimes on the order of a few days to a few decades, and their relative climate forcing impacts, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO₂ (CARB 2017a).

Recognizing their short-term lifespan and warming impact, short-lived climate pollutants are measured in terms of CO₂e using a 20-year time period. The use of GWPs with a time horizon of 20

years better captures the importance of the short-lived climate pollutants and gives a better perspective on the speed at which emission controls will impact the atmosphere relative to CO₂ emission controls. The *Short-Lived climate Pollutant Reduction Strategy*, which is discussed in Section 4.6.3, *Laws, Regulations, Plans, and Policies*, addresses methane, hydrofluorocarbon gases, and anthropogenic black carbon. Methane has a lifetime of 12 years and a 20-year GWP of 72. Hydrofluorocarbon gases have lifetimes of 1.4 to 52 years and a 20-year GWP of 437 to 6,350. Anthropogenic black carbon has a lifetime of a few days to weeks and a 20-year GWP of 3,200 (CARB 2017a).

4.6.2.3 Greenhouse Gas Inventories

International, National, Statewide, and Regional GHG Emissions

A GHG inventory is a quantification of all GHG emissions and sinks¹ within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a particular building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

Table 4.6-3 outlines the most recent global, national, statewide, and regional GHG inventories to help contextualize the magnitude of potential PMPU-related emissions. GHG inventories from member cities are included.

Table 4.6-3. Global, National, State, and Regional GHG Emissions Inventories

Emissions Inventory	CO₂e (metric tons)
2010 IPCC Global GHG Emissions Inventory	52,000,000,000
2019 EPA National GHG Emissions Inventory	6,558,300,000
2019 CARB State GHG Emissions Inventory	418,200,000
2012 SANDAG Regional GHG Emissions Inventory	34,670,000
2016 SANDAG Regional GHG Emissions Inventory (Draft)	26,000,000
2019 City of San Diego GHG Emissions Inventory	9,600,000
2014 City of Chula Vista GHG Emissions Inventory	1,249,503
2012 City of Imperial Beach GHG Emissions Inventory	96,400
2005 City of National City GHG Emissions Inventory	550,714
2016 City of Coronado GHG Emissions Inventory	112,801
2016 District GHG Emissions Inventory	504,554

Sources: IPCC 2014; EPA 2021; CARB 2021a; SANDAG 2015, 2021; City of San Diego 2020; City of Chula Vista 2018; City of Imperial Beach 2019; City of National City 2011; City of Coronado 2021; District 2018b.

CO₂e = carbon dioxide equivalent; IPCC = Intergovernmental Panel on Climate Change; EPA = United States Environmental Protection Agency; CARB = California Air Resources Board; SANDAG = San Diego Association of Governments.

Like the Federal and State governments, the District conducts periodic GHG inventories to assess its progress in reducing emissions and meeting its climate change goals. Sources throughout the proposed PMPU area that generate GHG emissions include tenant facilities (e.g., hotels, marinas,

¹A GHG sink is a process, activity, or mechanism that removes a GHG from the atmosphere.

boatyards), maritime activity (e.g., the movement of goods and people associated with marine terminal operations), and Port operations (e.g., District-owned building energy consumption and fleet activity).

The District adopted a CAP in 2013 that established a plan and framework for achieving a 10 percent decrease in GHG emissions from a 2006 baseline, by 2020. The CAP also established a longer-term GHG reduction goal to reduce GHG emissions by 25 percent from a 2006 baseline, by 2035. The CAP contains a suite of GHG reduction strategies to meet the 2020 target and demonstrate progress toward the 2035 goal.

The District recently completed an emissions inventory for 2016 calendar year conditions. In addition, since the adoption of the CAP, more refined data and updated methodologies have become available to estimate GHG emissions. CARB guidance states that it is good practice to recalculate historic emissions when methods are changed or refined (CARB 2017a). Given this, a recalibration of the 2006 baseline was deemed vital to track progress toward 2020 goals. This 2006 recalibration was included in the District's 2016 updated inventory, which was based on more locally specific and comprehensive datasets.

Table 4.6-4 provides a comparison of the recalibrated 2006 baseline and emissions generated during 2016. As shown, GHG emissions in 2016 are lower than the revised 2006 baseline. This decrease in emissions is due to several factors, including reduced Ocean-Going Vessel (OGV) calls and berthing duration, increased on-road vehicle fuel economy, decreased natural gas consumption, and a decrease in the SDG&E electricity emission factor due to the increase in renewable generations under the State Renewable Portfolio Standard.

Note that Table 4.6-4 includes adjustments to capture changes since the 2016 CAP Progress Report was released. Specifically, in the 2016 CAP Progress Report, GHG emissions associated with natural gas consumption from sources regulated by CARB, under the Cap-and-Trade program, was assumed to be 114,847 MTCO_{2e}. However, that reporting was based on 2015, since 2016 was not available at the time. Further, the 2015 reporting included a permitted facility that was not regulated by CARB, under Cap-and-Trade. The revised estimates provided in Table 4.6-4 include actual 2016 reporting for the CARB Regulated Source (CP Kelco) and adds the natural gas-related emissions that were erroneously assigned to CARB Regulated Sources back to tenant uses. Goal setting is based on the 2006 and 2016 emission estimates, without the CARB Regulated Sources. As shown in Table 4.6-4 below, GHG emissions were reduced by approximately 18 percent from 2006 to 2016.

Note that apportioning emissions into planning districts, based on the activities within each planning district, may be misleading because some of the larger emission categories, such as on-road (passenger vehicles), tenant electricity, tenant natural gas, and water and solid waste, do not occur solely within specific areas of the Port (e.g., vehicles travel between and through planning districts).

Table 4.6-4. Comparison of Recalibrated 2006 Baseline and Calendar Year 2016 Emissions (MTCO_{2e} per year)

Source	2006 Revised	2016 Inventory
Maritime		
Ocean-Going Vessels	38,975	20,766
Shore Power	--	1,734

Source	2006 Revised	2016 Inventory
Harbor Craft	22,785	25,500
Cargo Handling Equipment	3,435	2,183
Freight Rail	3,084	2,646
On-Road Vehicles	29,947	14,325
Non-Maritime Tenants		
Electricity	113,959	99,844
Natural Gas	66,396	33,233
Water	13,169	9,741
Waste	19,239	21,346
On-Road (passenger vehicles)	106,672	106,414
Off-Road Equipment (Yacht Clubs, Lumber Yards, etc.)	1,544	1,286
Off-Road Equipment (Shipyards)	2,109	1,825
Off-Road Equipment (Boatyards)	693	575
Generators	717	718
Recreational Boating	57,662	55,227
Port Operations		
Electricity	3,567	1,537
Natural Gas	327	145
On-Road	1,045	988
Off-Road	591	715
Total Emissions without CARB Regulated Sources	485,917	399,739
Change from 2006	-	-18%
<i>CARB Regulated Sources</i>	<i>95,833</i>	<i>104,815</i>

Source: District 2018a.

CARB = California Air Resources Board.

4.6.2.4 Planning District Setting

Activity throughout the proposed PMPU area generates GHG emissions. Each of the planning districts has a combination of unique emission sources, resulting in varying emission levels throughout the PMPU area. The proposed PMPU area comprises approximately 3,535 acres of water and 2,403 acres of land in and around the San Diego Bay and along the Imperial Beach oceanfront. For example, emission sources within the proposed PD4 include OGVs, locomotives, automotive repair and transport activities, and painting operations, whereas emission sources within the PD8 are limited to recreational-based activities (e.g., public parks, beach access parking lots). Water and land uses with key emission sources by planning district are shown in Table 4.6-5. Each planning district results in mobile source and electricity emissions and, as such, each involves the primary GHGs of concern, including CO₂, CH₄, and N₂O.

Table 4.6-5. Water and Land Uses and Emission Sources by Planning District

Planning District	Water and Land Uses	Emission Sources and Emission Types
PD1: Shelter Island	Hotels, restaurants, yacht- or marine-related businesses, fishing piers, boat launches	Motor vehicles Building utilities Recreational and fishing vessels
PD2: Harbor Island	Hotels, restaurants, yacht- or marine-related businesses, airport parking, auto repair facilities, rental car facilities, Harbor Police, District headquarters	Motor vehicles Building utilities Recreational and fishing vessels District-owned equipment and vessels
PD3: Embarcadero	Hotels, restaurants, retail, museum, marine-related businesses, fishing piers, Convention Center, public parks, cruise ship terminal, manufacturing	Motor vehicles Building utilities Recreational and fishing vessels Maritime (vessels, equipment, and shore power) Manufacturing
PD4: Working Waterfront	Industrial warehouses and open storage, cold storage facilities, rail, marine shipping, fishing piers, public parks, ship building and repair	Shipyards electricity and equipment Maritime (vessels, equipment, and shore power) Rail Motor vehicles and terminal trucks
PD7: South Bay	Open space wetland and natural vegetation, marshy habitat conservation area, salt evaporation ponds	No emissions Net benefit of carbon sequestration
PD8: Imperial Beach Oceanfront	Beach, public parks, open water	Motor vehicles
PD9: Silver Strand	Beach, public parks, open water, hotel, restaurants, yacht- or marine-related businesses	Motor vehicles Building utilities Recreational and fishing vessels
PD10: Coronado Bayfront	Hotels, restaurants, retail, public parks, ferry landing, golf course, yacht- or marine-related businesses	Motor vehicles Building utilities Recreational and fishing vessels

4.6.2.5 Energy

California has a diverse portfolio of energy resources that produced 2,449.4 trillion British thermal units² (BTUs) in 2019 (U.S. Energy Information Administration 2019).³ Excluding offshore areas, the state ranked third in the nation in crude oil production in 2019, producing the equivalent of 920.1 trillion BTUs of energy. The state also ranked first in the nation for energy production from renewable resources (U.S. Energy Information Administration 2021a). Other energy sources in the

² One BTU is the amount of energy required to heat 1 pound of water by 1°F at sea level. BTU is a standard unit of energy that is used in the United States and is on the English system of units (foot-pound-second system).

³ Note that 2018 data are the most recent available.

state include natural gas (220.8 trillion BTUs), nuclear (168.8 trillion BTUs), wood and waste (139.3 trillion BTUs), and biofuels (31.4 trillion BTUs) (U.S. Energy Information Administration 2019).⁴

According to the U.S. Energy Information Administration, California consumed approximately 7,802 trillion BTUs of energy in 2019. Per capita energy consumption (i.e., total energy consumption divided by the population) in California is the lowest in the country, with 198 million BTU in 2019, which ranked 50th among all states. Natural gas accounted for the majority of energy consumption (28.3%), followed by motor gasoline (21.6%), renewable energy, including nuclear electric power, hydroelectric power, biomass, and other renewables (18.5%); distillate and jet fuel (14.9%), interstate electricity (8.8%), with the remaining 7.9 percent coming from a variety of other sources (U.S. Energy Information Administration 2021b). The transportation sector consumed the highest quantity of energy (39.4%), followed by the industrial (23.1%), commercial (18.8%), and residential (18.7%) sectors (U.S. Energy Information Administration 2021b).

Per capita energy consumption, in general, is declining due to improvements in energy efficiency and design. However, despite this reduction in per capita energy use, the state's total overall energy consumption (i.e., non-per capita energy consumption) is expected to increase over the next several decades due to overall growth in population, jobs, and vehicle travel. For example, annual electricity demand is anticipated to grow by about 1.59 percent from the year 2016 to 2030 (CEC 2018).

San Diego County is served by San Diego Gas and Electric (SDG&E), which provides energy service to over 3.6 million customers (i.e., 1.4 million accounts) in the county and portions of southern Orange County (SDG&E n.d.). The utility has a diverse power production portfolio, composed of a variety of renewable and non-renewable sources. Energy production typically varies by season and by year. Regional electricity loads also tend to be higher in the summer because the higher summer temperatures drive increased demand for air-conditioning. In contrast, natural gas loads are higher in the winter because the colder temperatures drive increased demand for natural gas heating.

Table 4.6-6 outlines the SDG&E power mix in 2020 compared to the power mix for the state). In 2019, the most recent year of data, SDG&E customers used 20,481 gigawatt hours of electricity and 534 million therms of natural gas (CEC 2019b). Customers used 21,157 gigawatt hours of electricity and 482 million therms of natural gas (CEC 2019b). Table 4.6-7 outlines the breakdown of electricity and natural gas usage by sector in the SDG&E service area. Residential and commercial uses account for 89 percent of electricity use and 94 percent of natural gas use within the SDG&E service area (CEC 2021).

Table 4.6-6. SDG&E and the State of California Power Mix in 2020 (percent)

Energy Resources	SDG&E Power Mix	California-Wide Power Mix
Eligible Renewables	31.0	33.1
<i>Biomass and Waste</i>	<i>2.1</i>	<i>2.5</i>
<i>Geothermal</i>	<i>0</i>	<i>4.9</i>
<i>Small hydroelectric</i>	<i>0</i>	<i>1.4</i>
<i>Solar</i>	<i>17.9</i>	<i>13.2</i>
<i>Wind</i>	<i>11.0</i>	<i>11.1</i>

⁴ No coal production occurs in California; however, imported coal made up approximately 3% of California's energy mix as of 2019. SDG&E, the energy provider for the San Diego region, does not have any coal in its energy mix as of 2019 (CEC 2019a).

Energy Resources	SDG&E Power Mix	California-Wide Power Mix
Coal	0	2.7
Large Hydroelectric	1.7	12.2
Natural Gas	26.2	37.1
Nuclear	0.2	9.3
Other	0	0.2
Unspecified Sources of Power ¹	40.9	5.4
Total	100	100

Source: SDG&E 2020.

¹ Electricity from transactions that are not traceable to specific generation sources.

Table 4.6-7. Electricity and Natural Gas Consumption in the SDG&E Service Area in 2019

Sector	Electricity (GWh)	Natural Gas (million therms)
Agriculture and Water Pump	355	5
Commercial	10,865	200
Industry	1,342	21
Mining and Construction	395	4
Residential	7,435	304
Streetlight	90	--
Total	20,481	534

Source: CEC 2019b.

GWh = gigawatt hours

4.6.3 Laws, Regulations, Plans, and Policies

The State of California has adopted various pieces of legislation addressing various aspects of climate change, GHG mitigation, energy efficiency, and climate change. Much of this establishes a broad framework for the State's long-term GHG and energy reduction goals and climate change adaptation program. The former and current governors of California have also issued several EOs related to the State's evolving climate change policy. Moreover, court rulings have helped define acceptable practices for adequate analysis of GHG emissions under CEQA, including setting thresholds, properly defining a level of significance, and identifying mitigation measures. The key regulations, laws, and policies that are relevant to the proposed PMPU are summarized below. Additional information pertaining to GHG emission reduction, fuel economy, and energy efficiency is included in Section 4.2, *Air Quality and Health Risk*.

4.6.3.1 International

International Maritime Organization International Convention for the Prevention of Pollution from Ships Annex VI and Initial IMO Strategy for GHG Reductions

The International Maritime Organization (IMO) amended Annex VI in 2011 to include fuel economy and GHG requirements. The new Chapter 4 of Annex VI includes requirements for energy efficiency

for ships and makes mandatory the Energy Efficiency Design Index for new ships, and the Ship Energy Efficiency Management Plan for all ships. The regulations apply to all ships of 400 gross tonnage and became effective January 1, 2013, with certain exceptions. These regulations are in effect today. In April 2018, IMO adopted an Initial IMO Strategy on reduction of GHG emissions from ships. The Initial IMO Strategy aims to reduce the total annual GHG emissions from international shipping by at least 50 percent by 2050 compared to 2008 while pursuing efforts towards phasing GHGs out entirely. The Initial IMO Strategy lays out a list of short-, mid-, and long-term candidate measures to achieve these GHG reduction goals.

4.6.3.2 Federal

There is currently no overarching Federal law specifically related to climate change or the reduction of GHG emissions. During the Obama administration, the U.S. Environmental Protection Agency (EPA) began developing GHG regulations under the Federal Clean Air Act (CAA). The Biden administration has restarted some of these efforts, including rejoining the Paris agreement, formally establishing a goal of achieving net-zero emissions, economy-wide, by no later than 2050, and establishing the Office of Climate Change and Health Equity (OCCHE); however, no Federal law is in effect at this time. At the state level, California has adopted broad statewide legislation to address various aspects of climate change and GHG emissions.

The EPA has issued an endangerment finding and cause or contribute finding for six key well-mixed GHGs—CO₂, CH₄, N₂O, HFC, PFC, and SF₆. The EPA has also issued the Greenhouse Gas Reporting Rule, which sets CO₂-based permitting criteria for certain industrial facilities. The Obama administration developed the Clean Power Plan in August 2015 to reduce CO₂ emission from electric power generation by 32 percent within 25 years, relative to 2005 levels. However, on February 9, 2016, the Supreme Court stayed implementation of the Clean Power Plan pending judicial review, which is still ongoing as of this analysis. As discussed in Section 4.2, the National Highway Traffic Safety Administration (NHTSA) and EPA have also proposed limits on future light-duty vehicle emission standards via the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule. However, repeal of the SAFE Rule is currently underway.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was intended to establish a comprehensive, long-term energy policy and is implemented by the U.S. Department of Energy. The Energy Policy Act addresses energy production in the U.S., including oil, gas, coal, and alternative forms of energy, and energy efficiency and tax incentives. Energy efficiency and tax incentive programs include credits for the construction of new energy-efficient homes, production or purchase of energy-efficient appliances, and loan guarantees for entities that develop or use innovative technologies that avoid the production of GHGs.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act, enacted by Congress in 2007, is designed to improve vehicle fuel economy and help reduce the United States dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil, and confronting climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard, requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels.
- Reduces United States demand for oil by setting a national fuel economy standard of 35 miles per gallon (mpg) by 2020 – an increase in fuel economy standards of 40 percent.

The Energy Independence and Security Act of 2007 also set energy efficiency standards for lighting (specifically light bulbs) and appliances. Development would also be required to install photosensors and energy-efficient lighting fixtures consistent with the requirements of 42 United States Code (USC) Section 17001 et seq.

4.6.3.3 State

California has established various regulations, laws, and policies to address GHG emissions, which also indirectly result in a reduction of energy. The most relevant of these regulations are described below.

Executive Orders

There are three primary EOs issued by the Executive Branch of the State of California related to the State's GHG reduction goals. EOs apply to State government operations but are not law and do not apply to non-government entities and facilities.

EO S-03-05

This EO established GHG-reduction targets for 2010 (2000 emission levels), 2020 (1990 emission levels), and 2050 (80 percent below 1990 levels).

EO S-30-15

This EO established a GHG reduction target for 2030 (40 percent below 1990 levels).

EO B-55-18

This EO established a new statewide goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” While this EO has not been codified in law, the EO directs CARB to ensure future Climate Change Scoping Plans (discussed below) identify and recommend measures to achieve the carbon neutrality goal.

Legislative Reduction Targets

In an effort to implement the EOs through State law, the State has passed legislation that establishes a broad framework for the long-term GHG reduction and climate change adaptation program at the State level. The two primary bills related to GHG reduction targets are as follows:

Assembly Bill 32

Assembly Bill (AB) 32 codified the 2020 reduction target of EO S-03-05 (i.e., by 2020, reach the GHG emissions levels of 1990). AB 32 also gave CARB authority to develop a plan that describes the approach California will take to achieve GHG reduction targets. CARB's plan to achieve the 2020

reduction target is referred to as the Scoping Plan. In 2016, the State of California achieved its 2020 GHG emission reduction targets as emissions fell below 431 million metric tons (MMT) of CO₂e. The annual 2030 statewide target emissions level is 260 MMT of CO₂e.

Senate Bill 32

Senate Bill (SB) 32 codified the 2030 reduction target of EO B-30-15 (i.e., by 2030, reach statewide GHG emission levels of 40 percent below 1990 levels). As part of SB 32, CARB updated the Scoping Plan to achieve the 2030 reduction target in 2017. With implementation of the 2017 Scoping Plan, regulated GHG emissions are projected to decline to 260 MMT of CO₂e per year by 2030.

Statewide Reduction Plans

CARB has various air quality and climate goals and various plans for achieving these goals, including attaining and maintaining air quality standards, achieving GHG reductions, reducing petroleum use, reducing community health risks from exposure to air pollution, and increasing renewable energy and energy efficiency.

AB 32 Scoping Plan

The AB 32 Scoping Plan identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires CARB and other State agencies to develop and enforce regulations and other initiatives to reduce GHG emissions. The AB 32 Scoping Plan, first adopted in 2008, comprises the State's roadmap for meeting AB 32's reduction target. Specifically, the scoping plan articulates a key role for local governments by recommending that they establish GHG emissions-reduction goals for both their municipal operations and the community that are consistent with those of the State (i.e., approximately 15 percent below current levels) (CARB 2008). The AB 32 Scoping Plan was updated in 2014 to reflect the economic downturn (CARB 2014).

2017 Scoping Plan Update

The 2017 Scoping Plan Update represents the State's roadmap to achieving long-term GHG reduction targets of SB 32. The Scoping Plan itself integrates various CARB regulations and strategies, including Cap-and-Trade, Low Carbon Fuel Standard (LCFS), SB 350, Sustainable Freight Action Plan, Mobile Source Strategy, and the Short-Lived Climate Pollutant (SLCP) Strategy. The Scoping Plan Update proposes meeting the 2030 goal by accelerating the focus on zero and near-zero technologies for moving freight, continued investment in renewables, greater use of low-carbon fuels including electricity and hydrogen, stronger efforts to reduce emissions of short-lived climate pollutants (CH₄, black carbon, and fluorinated gases), further efforts to create walkable communities with expanded mass transit and other alternatives to traveling by car, continuing the cap-and-trade program, and ensuring that natural lands become carbon sinks to provide additional emissions reductions and flexibility in meeting the target. The Scoping Plan Update also recommends that local governments aim to achieve community-wide efficiency of 6 metric tons (MT) CO₂e per capita by 2030 and 2 MTCO₂e per capita by 2050 in local climate action planning (CARB 2017a).

Reduction measures in the Scoping Plan are grouped into the following end-use sectors: Agriculture, Commercial and Residential, Electric Power, High GWP, Industrial, Recycling and Waste, and Transportation.

California Sustainable Freight Action Plan

The Sustainable Freight Action Plan provides an integrated action plan that establishes clear targets to improve freight efficiency, transition to zero-emission technologies, and increase the competitiveness of California’s freight system. The Sustainable Freight Action Plan was developed by several State agencies and is a recommendation document that integrates investments, policies, and programs across several State agencies to help realize a singular vision for California’s freight transport system. The Sustainable Freight Action Plan provides a recommendation on a high-level vision and broad direction to the Governor to consider for State agencies to utilize when developing specific investments, policies, and programs related to the freight transport system that serves California’s transportation, environmental, and economic interest. The Scoping Plan incorporates potential actions from the Sustainable Freight Action Plan that provide GHG emissions reduction benefits,

Mobile Source Strategy

CARB developed the Mobile Source Strategy to provide an integrated action plan that establishes an integrated planning perspective and common vision for transforming the mobile sector. The Mobile Source Strategy supports multiple planning efforts, including the State Implementation Plans, the Scoping Plan, the Short-Lived Climate Pollutant Reduction Strategy (discussed below), and the Sustainable Freight Action Plan (discussed above). The Mobile Source Strategy outlines CARB’s approach to reducing emissions from mobile sources. The Strategy includes actions to modernize and upgrade transportation infrastructure, enhance system-wide efficiency and mobility options, and promote clean economic growth. The Mobile Source Strategy is updated every 5 years. The latest update is the 2020 Draft Mobile Source Strategy, which was released for public review in November 2020 and revised based on public comments received in May 2021. CARB is anticipated to approve and adopt the revised 2020 Draft Mobile Source Strategy during a public meeting on October 29, 2021. (CARB 2021b).

While the concepts in the Draft Mobile Source Strategy will continue to be developed and translated into CARB planning documents over the coming years, CARB has emphasized that they aim to maximize the use of zero-emission technology to achieve emission reductions of GHGs along with criteria pollutants and air toxics. In 2020 Draft Mobile Source Strategy, various concepts for all mobile source categories are assumed. The concepts that are applicable to the proposed PMPU are summarized in Table 4.6-8. CARB notes that even with extremely aggressive electrification and accelerated turnover, coupled with aggressive vehicle miles traveled (VMT) reductions and fuel decarbonization, the mobile source sector alone cannot become carbon neutral by 2045.

Tale 4.6-8. Applicable Mobile Source Strategy Concepts

Category	Source	Scenario Assumptions
On-road	Light Duty Vehicles	70% ZEV + PHEV sales in 2030. 100% ZEV + PHEV sales in 2035. 7.9 M ZEV by 2030. 27.9 M ZEV+PHEV by 2045.
	VMT	15% reduction in statewide per capita GHG by 2050 compared to BAU.
	On Road Motorcycles	Alignment with EU5 standard for model year Y2024+ motorcycles.

Category	Source	Scenario Assumptions
		100% ZEM sales in 2035 and onward.
	Medium-Duty Vehicles	100% ZEV sales starting 2035.
	Heavy Duty Vehicles	Reflect heavy duty Omnibus, Advanced Clean Trucks, and Heavy-Duty Inspection and Maintenance Program starting in 2024, and Federal 0.02 g/bhp-hr starting in 2027. 100% of model year 2035 and newer vehicles registered in California will be ZEV. Accelerated turnover of older trucks.
Off-Road	Off-Road Efficiency Improvement	Zero emissions and hybridization where feasible with the goal of 12% reduction in GHG by 2030 and 30% by 2040.
	Off-Road Tier V Standard	Tier 5 being introduced starting in 2028–2030. 50–90% NOx reduction from current Tier 4 Final standard, and approximately 25% reduction in fuel consumption.
	Rail	100% of replaced locomotives will be Tier 4. Remanufacturing limit. Tier 5 being introduced in 2028/
	Ocean-Going Vessels	100% of Tier 0/1/2 visits are phased out by 2031. Tier 3 visits begin in 2025 (begin replacing all Tier 0–2). Tier 4 visits begin in 2028 (no additional Tier 3 visits).
	Construction	Full turnover of Tier 0/1/2 to Tier 4f by 2033.
	Small Off-Road Engines	100% of new sales will be zero-emission equipment (ZEE) by 2024 (2028 for generators).
	Transport Refrigeration Units	Accelerated penetration of electric TRU (from 10% in 2024 to 100% in 2034).
	Commercial Harbor Craft	All vessels (including commercial fishing) being Tier 4/5 by 2031. Introduction of plug-in hybrid for excursions and diesel-electric for tugs by 2030.
	Cargo Handling Equipment	Begin transition to full electric operation beginning in 2026 (accelerated turnover).
	Forklifts	Transition to zero-emission technology starting in 2025 with fully electric fleet by 2034.
Recreational Watercraft	New THC + NOx standards of 40 and 70% below current levels. Electrification of small outboard and personal watercraft engines.	

Source: CARB 2021c.

Note: Table does not include non-applicable categories, such as aircraft, airport ground support equipment, and agriculture equipment.

BAU = business as usual; ZEV = zero-emission vehicles; PHEV = plug-in hybrid electric vehicles; GHG = greenhouse gases; bhp-hr = brake horsepower hour; ZEM = zero-emission motorcycles; NOx = nitrogen oxides; THC = total hydrocarbons; TRU = transport refrigeration units; EU5 = Euro 5 emissions standards.

Short-Lived Climate Pollutant Reduction Strategy

SB 605 directed CARB, in coordination with other State agencies and local air districts, to develop a comprehensive Short-Lived Climate Pollutant (SLCP) Reduction Strategy. SB 1383, adopted in 2013, requires CARB to develop and implement a SLCP Reduction Strategy with the following 2030 goals: 40 percent reduction in methane, 40 percent reduction in hydrofluorocarbon gases, and 50 percent

reduction in anthropogenic black carbon. The bill also establishes the following targets for reducing organic waste in landfills and CH₄ emissions from dairy and livestock operations: 50 percent reduction in organic waste disposal from the 2014 level by 2020, 75 percent reduction in organic waste disposal from the 2014 level by 2025, and 40 percent reduction in CH₄ emissions from livestock manure management operations and dairy manure management operations below the dairy sector's and livestock sector's 2013 levels by 2030.

Per its directive, CARB adopted the SLCP Strategy in March 2017, establishing a path to decrease SLCPs from various sectors of the economy. Strategies span from wastewater and landfill practices and methane recovery to reducing natural gas leaks and consumption. The SLCP strategy also identifies measures that can reduce HFC emissions through incentive programs and limitations on the use of high-GWP refrigerants in new refrigeration and air-conditioning equipment (CARB 2017b).

Draft 2030 Natural and Working Lands Implementation Plan

In a joint, interagency effort, the California Environmental Protection Agency (CalEPA), California Department of Food and Agriculture (CDFA), California Natural Resources Agency (CNRA), CARB, and California Strategic Growth Council released the *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan* (Draft Plan), in January 2019 (CARB 2019a). The Draft Plan is specific to the natural and working lands sector, which includes farmland, rangeland, forests, grasslands, wetlands, riparian areas, seagrass, and urban green space. The Draft Plan addresses the carbon flux from this sector, including the ever-dynamic changes in both GHG emissions and carbon sequestration associated with the management of these lands, and includes reduction of GHGs and black carbon from forest fires and fire management. The Draft Plan serves as a multidisciplinary approach to conserve and maintain a resilient natural and working lands sector that will gradually shift the natural and working lands sector from being a net carbon emitter to being a net carbon sink, while also improving air quality, water quality, wildlife habitat, and recreation, and providing other benefits.

The Draft Plan sets goals for, at a minimum, increasing the rate of State-funded soil conservation practices fivefold, doubling the rate of State-funded forest management and restoration efforts, tripling the rate of State-funded oak woodland and riparian reforestation, and doubling the rate of State-funded wetland and seagrass restoration. The measures included in the Draft Plan are projected to result in cumulative emissions reductions of -36.6 to -11.7 million MTCO_{2e} by 2045 (CalEPA et al. 2019).

Regional Land Use and Transportation Planning to Reduce Vehicle Miles Traveled

Senate Bill 375, Sustainable Communities Strategy

SB 375 (2015) provides for a new planning process that coordinates land use planning, regional transportation plans, and funding priorities, originally in order to help California meet the GHG reduction goals established in AB 32. SB 375 requires regional transportation plans (RTPs) to incorporate a "sustainable communities strategy" (SCS). The goal of the SCS is to reduce regional VMT through land use planning and consequent transportation patterns. SCS measures include transportation demand management, transportation system management, and pricing. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented

development. CARB revised the San Diego Association of Governments' (SANDAG's) GHG target in 2018 to 15 percent reduction in emissions per capita by 2020 and 19 percent by 2035 based on a 2005 baseline.

Senate Bill 743

SB 743 (passed in 2013) requires revisions to the State CEQA Guidelines that establish new impact analysis criteria for the assessment of a project's transportation impacts. The intent behind SB 743 and revising the State CEQA Guidelines was to integrate and better balance the needs of congestion management, infill development, active transportation, and GHG emissions reduction. The Governor's Office of Planning and Research (OPR) recommended that VMT serve as the primary analysis metric, replacing the existing criteria of delay and level of service. In 2018, OPR adopted amendments to the State CEQA Guidelines and released a technical advisory outlining potential VMT significance thresholds for different project types. As of July 1, 2020, State CEQA Guidelines Section 15064.3 requires the use of VMT as the metric for analyzing potential impacts on transportation.

Vehicle Fuel Economy Standards

Fuel economy standards are discussed in Section 4.2. In summary, strengthening of the Pavley I standards (referred to as the *Advanced Clean Cars* measure) is expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025.

As of the time of this writing, the Federal SAFE Vehicles Rule Part 2 had been posted in the *Federal Register* (FR) but was intended to take effect on June 29, 2020. This new rule rolls back California fuel efficiency standards for on-road passenger vehicles. California is currently challenging this new rule in the court system, and it is reasonably foreseeable that the State will be successful in its legal challenges, for the reasons outlined in the State's lawsuit⁵ and on the CARB website.⁶ Furthermore, in February 2021 the Biden administration Department of Justice asked courts to put the litigation on hold while the administration "reconsidered the policy decisions of a prior administration." Most recently, on April 22, 2021, the Biden Administration formally proposed to roll back portions of the SAFE Rule thereby restoring California's right to enforce more stringent fuel efficiency standards, and in May 2021, NHTSA published the proposed rulemaking in the *Federal Register*, proposing to repeal key portions of the SAFE Vehicles Rule Part I.

The adjustment factors provided by CARB were applied to the estimates of passenger car and light truck emissions used in this analysis, which, in turn, were used to estimate fuel consumption. These factors are conservative as they assume the less efficient SAFE Rule standards.

Truck Fuel Economy Standards

Truck fuel economy standards are discussed in Section 4.2. In summary, both EPA and CARB have adopted the Phase 1 and 2 truck standards at the Federal level, and the Tractor-Trailer Greenhouse Gas Regulation at the State level. These regulations improve fuel economy and reduce GHG

⁵ *State of California et al. v. Chao et al.* (Case 1:19-cv-02826) available at: https://oag.ca.gov/system/files/attachments/press_releases/California%20v.%20Chao%20complaint%20%28000002%29.pdf.

⁶ <https://ww2.arb.ca.gov/resources/documents/carb-waiver-timeline>.

emissions by requiring the use of aerodynamic tractors and trailers that are also equipped with low rolling resistance tires.

The Advanced Clean Truck Regulation, adopted in 2020, accelerates the transition of zero-emission medium- and heavy-duty vehicles. The regulation requires the sale of zero-emission medium- and heavy-duty vehicles to increase over time. By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales. Zero-emission vehicles have no tailpipe emissions and are two to five times more energy efficient than traditional diesel vehicles.

Low Carbon Fuel Standard

The LCFS mandates a statewide goal be established to reduce the carbon intensity of California’s transportation fuels by at least 10 percent by 2020. In September 2018, the LCFS regulation was amended to increase the statewide goal to a 20 percent reduction in carbon intensity of California’s transportation fuels by at least by 2030. Note that while the LCFS regulation was amended and extended to ensure compliance with the 2030 Scoping Plan, CARB ultimately adopted a more stringent target (20 percent reduction in carbon intensity by 2030) than assumed in the 2030 Scoping Plan (18 percent reduction in carbon intensity by 2030). Therefore, future updates to the Scoping Plan are likely to include the more stringent version of the LCFS that was adopted by CARB. Note that the majority of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe).

Renewable Energy

Renewables Portfolio Standard

SB 1078 (2002), SB 107 (2006), SB 2 (2011), and SB100 (2015) govern California’s Renewables Portfolio Standard (RPS) under which investor-owned utilities, energy service providers, and Community Choice Aggregators must procure additional retail sales per year from eligible renewable sources. As of 2019, SDG&E eligible renewable procurement was approximately 31.0 percent (CPUC 2020).

Senate Bill 100

SB 100 (De León, also known as the “California Renewables Portfolio Standard Program: emissions of greenhouse gases”) was approved by the California legislature and signed by Governor Brown in September 2018. The bill establishes a new RPS target of 50 percent by 2026, increases the RPS target in 2030 from 50 to 60 percent, and establishes a goal of 100 percent zero-carbon energy sources by 2045.

Maritime

Regulations that affect maritime activity are discussed in Section 4.2. As detailed in that section, there are several regulations that address emissions from maritime activities. The majority of rules and regulations adopted to reduce emissions from goods movement have been focused on reducing the direct human health effects or to attain air quality standards (e.g., to meet ozone standards). However, many of these rules and regulations also reduce GHG emissions. For example, while the shore power rule is an air toxic control measure aimed at reducing air toxic emissions from vessels

at berth, vessels that utilize shoreside electrical supply at berth experience increasing GHG benefits over time as the electric grid becomes increasingly renewable (see *Renewable Energy* above). This example results in a reduction of GHG emissions per unit of electricity consumed over time.

Moreover, as discussed in *Truck Fuel Economy Standards* above, all trucks, including those associated with cargo movements at the Port, will see GHG benefits over time, as regulations drive the zero-emission medium- and heavy-duty vehicles market. Again, as the electric grid becomes increasingly renewable, GHG emissions per unit of electricity will decrease over time.

Building Efficiency

Updated every 3 years through a rigorous stakeholder process, Title 24 of the California Code of Regulations requires California homes and businesses to meet strong energy efficiency measures, thereby lowering their energy use. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), and Part 12 (Referenced Standards Code).

California Code of Regulations Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was adopted in 1978 in response to a legislative mandate to reduce California's energy consumption, which in turn reduces fossil fuel consumption and associated GHG emissions. California has also adopted Green Building Standards Code (CALGreen), which sets aggressive energy efficiency standards for new residential and non-residential buildings that are updated every few years. The update process reviews the standards with the legislative directive of "[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy." (Public Resources Code [PRC] Section 25402.)

The most recent update was the 2019 Building Energy Efficiency Standards, which were adopted in May 2018 and took effect on January 1, 2020. For projects implemented after January 1, 2020, the California Energy Commission (CEC) estimates the 2019 standards will reduce consumption by 7 percent for single-family residential buildings and 30 percent for non-residential commercial buildings, relative to the 2016 standards. Overall, the 2019 standards are anticipated to use about 53 percent less energy than structures developed under the 2016 standards, which in turn were 28 percent more efficient than the 2013 standards (CEC 2020). The State is already in the process of preparing 2022 building standards and energy efficiency requirements (CEC 2021b). SB 350, which was signed by Governor Brown in October 2015, also requires a doubling of energy efficiency (electrical and natural gas) by 2030, including improvements to the efficiency of existing buildings. Additional information on these building standards is provided in the regulatory setting discussion in Section 4.15, *Utilities and Service Systems*.

Cap-and-Trade

CARB adopted the Cap-and-Trade program in October 2011. The program is a market-based system with an overall emissions limit for affected emission sources. Affected sources include in-state electricity generators, hydrogen production, petroleum refining, and other large-scale manufacturers and fuel suppliers and distributors. The original Cap-and-Trade program set a compliance schedule through 2020. AB 398 extends the program through 2030 and requires CARB to make refinements, including establishing a price ceiling. Revenue generated from the Cap-and-

Trade program is used to fund various programs. AB 398 established post-2020 funding priorities, to include (1) Air Toxics and Criteria Pollutants, (2) Low and Zero Carbon Transportation, (3) Sustainable Agricultural Practices, (4) Healthy Forests and Urban Greening, (5) Short-lived Climate Pollutants, (6) Climate Adaptation and Resiliency, and (7) Climate and Clean Energy Research. This includes regulated activities at CP Kelco in the District's Tidelands.

Energy

Various regulations adopted pursuant to air quality and GHG emission reductions goals also provide benefits to energy conservation and consumption. In addition, the below pieces of legislation directly affect energy.

Senate Bill 350 (2015)

SB 350 (De Leon, also known as the "Clean Energy and Pollution Reduction Act of 2015") was approved by the California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions are to require the following by 2030: (1) an RPS of 50 percent and (2) a doubling of efficiency for existing buildings.

State Energy Plan

The CEC is responsible for preparing the State Energy Plan (SEP), which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The SEP calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the fewest environmental and energy costs. To further this policy, the SEP identifies a number of strategies, including providing assistance to public agencies and fleet operators.

California Energy Commission Requirements

The CEC is tasked with conducting assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety (PRC Section 25301(a)).

As the State's primary energy policy and planning agency, the CEC collaborates with State and Federal agencies, utilities, and other stakeholders to develop and implement State energy policies. Since 1975, the CEC has been responsible for reducing the State's electricity and natural gas demand, primarily by adopting new Building and Appliance Energy Efficiency Standards that have contributed to keeping California's per capita electricity consumption relatively low. The CEC is also responsible for the certification, and environmental review of thermal power plants 50 megawatts and larger, including all project-related facilities in California (CEC 2019c). The California Public Utilities Commission (CPUC) regulates investor-owned electric and natural gas utilities operating in California. The energy work responsibilities of the CPUC are derived from the California State Constitution, specifically Article XII, Section 3 and other sections more generally, numerous State legislative enactments, and various Federal statutory and administrative requirements. The CPUC regulates natural gas utility service for approximately 3.4 million customers that receive natural gas from SDG&E and other natural gas utilities across California (CPUC 2019).

State CEQA Guidelines, Appendix F

Appendix F of the State CEQA Guidelines contains energy conservation measures that promote the efficient use of energy for projects. In order to ensure that energy impacts are considered in project decisions, CEQA requires that Environmental Impact Reports (EIRs) include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

The goal outlined in Appendix F of the State CEQA Guidelines is to conserve energy through the wise and efficient use of energy. The means of achieving this goal include the following.

- Decreasing the overall per capita energy consumption.
- Decreasing reliance on natural gas and oil.
- Increasing reliance on renewable energy sources.

4.6.3.4 Regional

San Diego Air Pollution Control District

The AB 32 Scoping Plan does not provide an explicit role for local air districts in implementing AB 32, but it does state that CARB will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting, as well as through their role as a CEQA lead or responsible agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents. As discussed in Section 4.2, the San Diego Air Pollution Control District (SDAPCD) is responsible for air quality planning in San Diego County. To date, SDAPCD has not developed specific thresholds of significance with regard to the GHG emissions in CEQA documents.

Community Emissions Reduction Plan

The Community Emissions Reduction Plan (CERP) contains detailed information and strategies that are intended to reduce both air pollution emissions and community exposure to air pollution in the Community of Portside Environmental Justice Neighborhoods (Portside Community).

The goals in the CERP are aspirational and are intended to guide the community members, businesses, organizations, and government agencies partnering in the implementation of the CERP to support health and environmental justice in the Portside Community. While there might not be a clear path to reach some of these goals, the goals identify the direction in which the community wants to go to achieve emission reductions beyond regulatory requirements. As technology evolves and data continues to be collected, the goals in the CERP may be adjusted (SDAPCD 2021).

The CERP was presented in two phases. Phase I includes actions that have been fully developed and supported by all jurisdictions or organizations that have an implementation role. The Phase I Draft CERP was released in September 2020. The Phase II CERP was finalized by SDAPCD in July 2021 and includes 11 goals and 39 actions to achieve these emission reductions. Goals include reducing TAC emissions in the community, supporting electric freight truck infrastructure and upgrades, quantifying health risk from port and non-port activities, establishing health risk reduction goals,

and implementing actions to achieve those goals (SDAPCD 2021). The Portside Community's CERP was approved by CARB's governing board in October 2021 (CARB 2021d).

San Diego Association of Governments

San Diego Forward: The Regional Plan

SANDAG's San Diego Forward: The Regional Plan, which incorporates the 2050 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS), was adopted in 2015 and provides a planned vision for the region's transportation system through 2050. The plan also incorporates a sustainable communities strategy as required by SB 375, which includes implementation of a Transportation Demand Management (TDM) strategy to help local governments reduce energy consumption. The update to the Regional Plan was released for public review in May 2021, the Draft EIR for the 2021 Regional Plan was released in summer 2021, and the EIR is expected to be adopted in December 2021.

SANDAG Energy Programs

SANDAG's Energy and Climate Change program supports local efforts to reduce GHG emissions in alignment with statewide goals to prepare for the impacts of climate change. Projects include climate action planning and energy engineering services for local jurisdictions, electric vehicle charging, and climate adaptation (SANDAG 2019).

Through its Energy Roadmap Program, SANDAG provides energy efficiency and engineering support to qualifying local jurisdictions (i.e., cities), which includes free energy assessments and energy management plans, or "Energy Roadmaps," to SANDAG member agencies that do not have Local Government Partnerships with SDG&E.

In July 2015, SANDAG launched Plug-in San Diego through a 2-year CEC grant. The program implemented recommendations from SANDAG's Electric Vehicle (EV) Readiness Plan through a combination of resource development, training, technical assistance through an EV Expert, and outreach. SANDAG has provided various reports and documents to assist property owners in acquiring EV charging infrastructure and better understanding the technologies, incentives, and installation options available.

SANDAG Regional Energy Strategy

The Regional Energy Strategy (RES) serves as the energy policy blueprint for the region through 2050. The RES establishes long term goals in eleven topic areas including energy efficiency, renewable energy, distributed generation, transportation fuels, land use and transportation planning, border energy issues, and the green economy. Priority Early Actions of the Regional Energy Strategy include the following:

1. Pursue a comprehensive building retrofit program to improve efficiency and install renewable energy systems.
2. Create financing programs to pay for projects and improvements that save energy.
3. Utilize the SANDAG-SDG&E Local Government Partnership to help local governments identify opportunities and implement energy savings at government facilities and throughout their communities.

4. Support land use and transportation planning strategies that reduce energy use and GHG emissions.
5. Support planning of electric charging and alternative fueling infrastructure.
6. Support use of existing unused reclaimed water to decrease the amount of energy needed to meet the water needs of the San Diego region.

In the RES, SANDAG acknowledges that the State’s “preferred loading order” to meet goals for satisfying the State’s growing electricity demand. The preferred loading order is as follows:

1. Increase energy efficiency.
2. Increase demand response – temporary reduction or shift in energy use during peak hours.
3. Meet generation needs with renewable and distributed generation resources.
4. Meet new generation needs with clean fossil-fueled generation and infrastructure improvements.

The RES contains a suite of goals and measures to achieve those goals. For example, the RES includes an energy efficiency and conservation goal of reducing per capita electricity consumption 20 percent by 2030 in order to compensate for population growth. Other regional goals include recommended actions and goals for renewable energy, distributed generation, reducing water consumption and diversifying water sources, reducing peak demand, smart energy, replacing inefficient power plants, supporting alternative fuel transportation, appropriate land use planning, among others. To accomplish these goals, SANDAG recommends various measures that local jurisdictions can implement to achieve the goals of the RES, including pursuing a comprehensive building retrofit program and identifying, securing, or developing funding mechanisms to pay for energy-related projects and programs. The RES will be updated periodically to reflect progress toward RES goals, account for changes in energy and climate change policy, and make recommendations for continued progress.

4.6.3.5 Local

District Plans and Programs

The District developed the Green Port Program to support the goals of the Green Port Policy, which was adopted in 2008. The Green Port Program supports resource conservation, waste reduction, and pollution prevention. The Clean Air Program is one key area of the Green Port Program, with the primary goal of reducing GHG emissions and other air emissions from Port operations at its three marine terminals. The Clean Air Program seeks to voluntarily reduce emissions through the identification and evaluation of feasible and effective control measures. Through this program, the District has identified control measures to achieve a reduction of pollutants from the largest sources. The Clean Air Program will continue to be refined and adapted to future changes in District operations. Recent updates to the Clean Air Program include the Maritime Clean Air Strategy (MCAS), which is a strategic planning document, identifying goals and objectives that are consistent with the District Board of Port Commissioners’ (Board) vision of health equity and a clean, sustainable, and modern seaport. The MCAS is intended to guide future decision-making and provide a planning framework for potential future actions that may be implemented to achieve the

goals and objectives identified in the MCAS. A detailed description of the MCAS is provided under the *Local Regulations* in Section 4.2 and is summarized in the context of GHG emissions below.

The District and SDG&E have also established a partnership to increase energy efficiency and reduce overall energy consumption. SDG&E currently allocates a portion of funds collected from utility customers to energy efficiency programs with local governments. The District uses some of those funds to develop energy efficiency education programs, track energy consumption, perform energy audits, and implement energy retrofits. The District's energy efficiency programs benefit employees, tenants, and the general public.

Climate Action Plan

As noted above under *State Reduction Plans*, CARB encourages local governments to adopt a reduction goal for municipal operations emissions and move toward establishing similar goals for community emissions that parallel the State's commitment to reducing GHG emissions (CARB 2008). The District adopted a CAP in December 2013. The CAP includes an inventory of existing (2006) and projected emissions in 2020, 2035, and 2050 and identifies the District's GHG reduction goals and measures to be implemented to support meeting the statewide reduction goals set forth in AB 32 (1990 levels by 2020). Port-wide 1990 emissions were not quantified given activity data gaps; instead, a base year of 2006 was used to calculate reductions needed at the Port to reach 1990 levels by 2020. Consistent with AB 32 targets, a 10 percent reduction target (471.3 million MTCO_{2e} in 2006 and estimated 426.6 million MTCO_{2e} in 1990 statewide) was used as the Port-wide reduction target for 2020. As shown in Table 4.6-4 above, the District's GHG emissions were reduced by 17.7 percent from 2006 to 2016.

Green Port Program and Green Port Policy (BPC Policy No. 736)

The District's Board adopted the Green Port Policy in 2007. This policy establishes guiding principles to achieve long-term environmental, societal, and economic benefits through resource conservation, waste reduction, and pollution prevention. The policy provides the overall framework for the Green Port Program. The Green Port Program is an umbrella program designed to achieve the District's environmental sustainability goals in six key areas: water, energy, air, waste management, sustainable development, and sustainable business practices. It was established in early 2008 to achieve the objectives outlined in the District's Green Port Policy. Policy objectives include the following.

- Minimize, to the extent practicable, environmental impacts directly attributable to operations on San Diego Bay and the tidelands.
- Strengthen the District's financial position by maximizing the long-term benefits of energy and resource conservation.
- Prevent pollution and improve personal, community, and environmental health.
- When possible, exceed applicable environmental laws, regulations, and other industry standards.
- Ensure a balance of environmental, social, and economic concerns are considered during planning, development, and operational decisions.
- Define and establish performance-driven environmental sustainability objectives, targets, and programs.

- Monitor key environmental indicators and consistently improve performance.
- Foster socially and environmentally responsible behavior through communications with employees, tenants, stakeholders, and the community.
- Collaborate with tenants to develop an integrated, measurable, Bay-wide environmental sustainability effort.

At present, the Green Port Program primarily focuses on things the District can do to be more environmentally sustainable, such as using less water and being more energy efficient in its own operations. In the future, the District will work with its tenants (businesses that lease bayfront land from the District), local environmental groups, and others around San Diego Bay to identify ways they can support the Green Port Program.

Maritime Clean Air Strategy

As mentioned above, and as discussed in detail in Section 4.2, the MCAS is a strategic planning document that is intended to guide future decision-making and provide a planning framework for potential future actions that may be implemented to achieve the goals and objectives identified in the MCAS. While the vision of the MCAS is *Health Equity for All*, with a primary focus on air pollutants that contribute to negative health outcomes (criteria pollutants and toxic air contaminants), most of the measures in the MCAS achieve GHG reductions as a co-benefit as well. For example, MCAS Truck Goal 1 aims to improve air quality in the Portside Community by accelerating the implementation of zero-emission/near-zero-emission trucks. Electrifying trucks is an air quality- and health-driven goal, designed to reduce diesel emissions from trucks traveling through the neighboring communities. However, this effort would achieve GHG reductions as a co-benefit due to the fact that the electrical grid emits fewer GHG emissions than diesel combustion. Moreover, as the electrical grid gets cleaner (lower emitting) over time due to RPS and overall net zero generation goals, GHG emissions from trucks, and all other equipment that transitions from combustion to electric, will trend down even more over time.

The MCAS includes two short-term goals for 2030 and complementary long-term goals. Short-term goals for 2030 include the following:

- **Long-Term Goal for Trucks:** In advance of the State’s goals identified in Executive Order No. N-79-20, attain 100 percent zero-emission truck trips by 2030 for all trucks that call at the Port’s two marine cargo terminals.
- **Long-Term Goal for Cargo Handling Equipment:** In advance of the State’s goals identified in Executive Order No. N-79-20, the transition of diesel cargo handling equipment to 100 percent zero-emission equipment by 2030.

Long-term goals include the following:

- **Long-term Goal for Harbor Craft:** Tugboat-related Diesel Particulate Matter (DPM) emissions identified in the District’s Emissions Inventory (2019) will be reduced by half by transitioning to zero-emission/near-zero-emission technologies and/or other lower-emitting engines or alternative fuels.
- **Long-term Goal for Port Fleet:** Transition Port-owned fleet of vehicles and equipment to ZE/NZE emission technologies in manner that meets operational needs and reduces emissions, as outlined below:

- Beginning in 2022, transition light-, medium-, and heavy-duty vehicles to zero-emission vehicles.
- Transition emergency vehicles to alternative fuels, including hybrid, electric, and/or low carbon fuels.
- Convert equipment, such as forklifts and lawn maintenance equipment, to zero-emission equipment.
- Seek opportunities to advance lower emitting solutions for marine vessels.
- **Long-term Goal for Ocean-going Vessels:** Equip marine terminals with shore power and/or an alternative technology to reduce ocean-going vessel emissions for ships that call to the Port.

The MCAS is intended to keep the District in front of and go beyond State regulations. The MCAS will serve as a living document, and the District will regularly report to the Board, including comprehensive updates every two years. The measures in the MCAS may change over time, based on Board direction or as technology improvements occur.

The draft revised MCAS was released for public review in August 2021, and it was adopted by the District Board in October 2021. The goals and strategies will guide the District's investments in zero emissions technology and electrification and will allow the District to help tenants and terminal operators prioritize replacements over time. As noted in the MCAS document, the MCAS is intended to guide future decision-making and provide a planning framework for potential future actions that may be implemented to achieve the goals and objectives identified in the MCAS. The MCAS focuses on maritime and shipyard activities. Measures from both the MCAS and potentially the CERP will be applicable to new projects as they arise.

4.6.4 Project Impact Analysis

4.6.4.1 Methodology

GHG Emissions

GHG impacts associated with construction and operation of the proposed PMPU were assessed and quantified (where applicable) using industry standard and accepted software tools, techniques, and emission factors. A summary of the methodology is provided below. A full list of assumptions and emission calculations can be found in Appendix C. The methodology used to estimate GHG emissions discussed below is the same that was used to estimate air quality emissions, as described in Section 4.2.

Construction

Land uses that could be developed under the proposed PMPU would generate construction-related GHG emissions from mobile and stationary construction equipment exhaust, and employee and haul truck vehicle exhaust. However, the specific design, size, location, and construction techniques and scheduling that would be utilized for each individual development project occurring from implementation of the proposed PMPU are not currently known. With an anticipated buildout year of 2050, development of the various land uses associated with the proposed PMPU would occur over

an extended period and would depend on factors such as local economic conditions, market demand, and other financing considerations.

Although the proposed PMPU would not directly result in construction activities, future development projects that are proposed, consistent with the proposed PMPU policies and land/water designations, would include construction activities. Therefore, construction activities are a reasonably foreseeable indirect consequence of the proposed PMPU's implementation. In order to evaluate future construction activities, it is assumed that construction activities are likely to occur periodically over the 30-year planning horizon, through 2050. Moreover, construction activities could be more concentrated in certain years and timeframes.

The GHG analysis evaluates the total GHG emissions associated with all baywide development at full buildout of the proposed PMPU, as shown in Table 4.2-12 in Section 4.2. Construction emissions (i.e., CO₂, CH₄, and N₂O) were calculated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 based on proposed land use types using CalEEMod default values for construction schedule, phasing, equipment, and vehicle trips.

Consistent with established protocols and published guidance from other lead agencies and air districts, construction emissions are amortized over the expected operational life of the PMPU (2050) and added to annual operational emissions.

Operation

GHG emission sources at the Port include tenant facilities (e.g., hotels, marinas, boatyards), maritime activity (e.g., the movement of goods and people associated with marine terminal operations), and District operations (e.g., District-owned building and outdoor energy consumption and fleet activity). Emission sources include on-road activity related to passenger car and freight vehicle exhaust; off-road activity related to freight movement and industrial activities (e.g., boatyards, shipyards); off-road boating emissions related to recreational boating, commercial fishing, sport/charter fishing, excursions, and ferries; electricity and natural gas consumption associated with building energy and to power maritime shore power; and other utility uses, such as water consumption and waste and wastewater generation associated with land uses (e.g., hotels).

Under the PMPU, new proposed policies that affect all water and land uses baywide would be implemented through proposed elements, and allowable water and land uses would be modified. Buildout of the proposed PMPU is likely to change and in some cases increase activity associated with these emission sources.

Analysis Years

The proposed PMPU is designed to guide the use and development of District Tidelands through the horizon year of 2050. Development of the various land uses associated with the proposed PMPU would occur over an extended period and would depend on factors such as local economic conditions, market demand, and other financing considerations, with an assumed buildout of all land use changes by 2050. Additionally, the analysis here considers the year 2030, which is the next statewide GHG milestone target after the project's opening day (certification of this Program EIR [PEIR]). To provide an analysis of conditions in 2030, this analysis considers activity and emission profiles (e.g., regulatory standards at a specific analysis year, discussed in more detail below) that could be in place by both 2030 and 2050. In most cases, this 2030 activity estimate is based on the assumption that land uses, development, and associated activity change linearly over time between

existing and buildout conditions. This is the case for all development and acreage changes. For the Tenth Avenue Marine Terminal (TAMT), the methods employed for estimating activity in 2030 is as follows.

Activity assumptions for TAMT are based on the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component FEIR (TAMT EIR, December 2016), which assumes full buildout in 2035. For purposes of this analysis, the throughput at full buildout assumed for 2035 is the same throughput assumed for buildout by 2030. More information on TAMT is provided below.

New land use development (e.g., hotel rooms, retail and restaurant square footage) assumed in 2030 and at full buildout of the proposed PMPU relative to existing conditions is summarized in Table 4.2-12 of Section 4.2. Descriptions of method for each source type (e.g., motor vehicles, electricity) are provided below.

As noted, the net change in vehicle activity, utility and energy consumption, and boating activity for 2030 is 41 percent of the net change by 2050, based on the number of years between baseline (2016) and full buildout (34 years), and the number of years between baseline (2016) and 2030 (14 years) (i.e., $14/34 \approx 41$ percent).

Motor Vehicles

GHG emissions from motor vehicles associated with the proposed PMPU were evaluated using the EMFAC2021 emissions model (version 1.02) and traffic data provided by the traffic engineers, as summarized in detail in Section 4.14, *Transportation, Circulation, and Mobility*. Daily VMT were provided for new development under full buildout of the proposed PMPU. To estimate emissions in 2030, daily VMT under 2030 conditions were interpolated between 2016 and 2050 conditions. The mobile source emission factors (grams per mile) were averaged in EMFAC2021 based on all vehicle and fuel types at aggregated speeds for the vehicle fleet operating within the San Diego Air Basin (SDAB) for each analysis year. GHG emissions from vehicle movement were calculated by multiplying the VMT estimates by the appropriate emission factors provided by EMFAC2021, and emissions from vehicle movement were added to process emissions (i.e., emission from vehicle starts, running losses, etc.), which were calculated by multiplying the daily trips by the appropriate emission factors provided by EMFAC2021. Project-specific vehicle trip information used to generate mobile source emission estimates given in Section 4.14 is summarized in Table 4.2-13 of Section 4.2, *Air Quality and Health Risk*. The analysis also includes CARB's criteria pollutant adjustment factors to account for the SAFE Vehicle Rule Part One and the Final SAFE Rule, which are embedded in the EMFAC2021 model.⁷

Land Use Development Area and Energy Sources

Operational area, energy, water, solid waste, and wastewater emissions were estimated under 2030 and 2050 development conditions using CalEEMod, version 2020.4.0. Energy sources include the

⁷ On September 27, 2019, the EPA and the NHTSA published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program" (84 FR 51,310 [September 27, 2019]). The Part One Rule revokes California's authority to set its own greenhouse gas emissions standards and set zero-emission vehicle mandates in California. To accurately estimate future transportation emissions, CARB has prepared off-model adjustment factors for EMFAC2017. These adjustments are provided in the form of multipliers that can be applied to the emissions outputs from the EMFAC model and account for the impact of the SAFE Vehicle Rule Part One.

combustion of natural gas as well as the use and generation of electricity. Water consumption results in indirect GHG emissions from the conveyance and treatment of water. Solid waste and wastewater generation results in fugitive CH₄ and N₂O emissions from the decomposition of organic matter.

The changes in area, energy, water, solid waste, and wastewater emissions from implementation of the proposed PMPU were quantified based on the change in land uses associated with buildout of the PMPU, which are provided in Table 4.2-12 of Section 4.2.

The electricity emissions were estimated based on projected SDG&E's energy intensity factors for 2030 and 2050 (370 pounds per pounds of CO₂e per megawatt-hour [MWh]) in 2030, and carbon free in 2050) from SANDAG's 2016 regional inventory (SANDAG 2021), which account for RPS targets of 60 percent RPS by 2030 and 100 percent carbon-free electricity by 2045 under SB 100.

Emissions from natural gas, water, wastewater, and solid waste generation were estimated based on default consumption data for the various land uses within CalEEMod (i.e., therms, gallons, tons) and default emission estimation from the project proponent and CalEEMod's default method for estimating natural gas, water, wastewater, and solid waste emissions in San Diego County.

Recreational Boating, Commercial Fishing, and Sport/Charter Fishing

Emissions associated with boating and fishing activity would change over time if additional slips and berthing areas are added. Each of these activity types is summarized below.

- Recreational boating includes non-commercial boats and harbor craft that are used solely for personal enjoyment, and include a variety of gasoline- and diesel-powered vessels. San Diego Bay has numerous marinas and yacht clubs as well as four public boat launch ramps. Recreational boating occurs at various planning districts, including PD1, PD2, PD3, PD9, and PD10.
- Commercial fishing includes those vessels that carry crew to fishing areas both within and outside 24 nautical miles of the Port. Commercial fishing vessels are harbored at commercial fishing areas at Shelter Island (PD1) and Tuna Harbor (PD3).

A summary of fishing and recreational boating emissions estimates from the 2016 maritime air emissions inventory is provided in Table 4.6-4. Note that the emissions shown in Table 4.6-4 are for all planning districts, even those excluded from the proposed PMPU analysis herein.

Emission estimates for all baywide activities were assigned to each planning district based on the number of current slips within each planning district. Existing slips counts by slip type are as follows, including areas excluded from this PMPU analysis:

- Recreational boating: 6,780 total slips, based on 2,420 within PD1, 2,228 within PD2, 418 within PD3, 250 within PD5, 926 within PD6, 167 within PD9, and 364 within PD10.
- Commercial fishing: 228 slips, based on 123 slips within PD1 and 105 slips within PD2.

Table 4.2-15 of Section 4.2 summarizes the change in boating and fishing slips associated with PMPU buildout and in 2030. Additional new slips by 2030 is assumed to be 41 percent of the net change by 2050. As shown, there would be an increase in both commercial fishing and recreational boating slips as part of the proposed PMPU.

Tenth Avenue Marine Terminal

The TAMT EIR evaluated potential GHG emissions impacts from buildout of the TAMT Redevelopment Plan through 2035. The analysis of the proposed PMPU evaluates activities baywide through 2050. While this PEIR does not re-analyze buildout of the TAMT Redevelopment Plan, it does include GHG emissions from TAMT between 2035 and 2050. The proposed PMPU would not result in any changes in land use or cargo throughput at TAMT.

Energy

Public Resources Code Section 21100(b)(3) states that an EIR must include “mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy.” State CEQA Guidelines Section 15126.2(b) further states that an EIR’s analysis of energy impacts must include a project’s energy use during all phases and components, including transportation, construction-, and operations-related energy use.

Energy impacts would occur if the proposed PMPU would result in the wasteful, inefficient, or unnecessary use of energy. Energy impacts would also occur if the proposed PMPU would require or result in the construction of new energy system infrastructure or the expansion of existing infrastructure, the construction of which could cause significant environmental effects. The energy analysis for the proposed PMPU evaluates the following sources of energy consumption associated with existing conditions and future development under the proposed PMPU.

Energy Use During Construction

Implementation of the proposed PMPU would result in energy use from construction of waterside and landside development. Energy use associated with construction activities includes the consumption of transportation fuels (i.e., gasoline and diesel) for equipment use and employee, delivery, and haul truck vehicle travel along with electricity consumption by temporary buildings used during construction. Diesel fuel would be required for operation of heavy-duty off-road construction equipment (e.g., cranes, forklifts, loaders) that would be used for a variety of activities, including demolition of structures, walkways, and asphalt; construction of buildings and infrastructure; and grading and laying foundations. It was assumed that all off-road equipment would be diesel-powered. Both diesel and gasoline fuel would also be required for the operation of on-road vehicles (e.g., pickup trucks, flatbed trucks, passenger cars) which would be used for material and equipment hauling, crew and material movement, employee commuting, and material disposal.

Energy use during construction was estimated using a combination of methods and energy factors from published best available documentation. Fuel consumption was estimated using the CO₂ emission outputs from the GHG construction estimates, as discussed above. Energy usage associated with fuel consumption was calculated by converting CO₂ emissions estimated from the construction analysis using the rate of CO₂ emissions per gallon of combusted gasoline (8.78 kilograms/gallon) and diesel (10.21 kilograms/gallon) (Climate Registry 2020). The estimated fuel consumption was converted to BTUs, assuming an energy intensity of 113,927 BTUs per gallon of gasoline and 129,488 per gallon of diesel, and electricity was converted to BTUs assuming an energy intensity of 3,416 BTUs per kilowatt hour (kWh) (Argonne National Laboratory 2015). A full list of assumptions and emission and energy calculations for construction can be found in Appendix C.

Energy Use During Operation

Operation of the proposed PMPU would require energy associated with tenant facilities (e.g., hotels, marinas, boatyards), maritime activity (e.g., the movement of goods and people associated with marine terminal operations), and District operations (e.g., District-owned building and outdoor energy consumption and fleet activity). These uses would require natural gas for space and water heating, electricity for building operations and maritime shore power, and diesel and gasoline for boating and visitor travel to and from future project sites.

Operational energy use was estimated using the same methods and energy factors described for short-term construction energy use, above. Fuel consumption during operation was calculated by converting GHG emissions estimated for the GHG operational analysis using the rate of CO₂ emissions per gallon of combusted gasoline and diesel. Fuel consumption was then converted to energy using industry standard emission factors for BTUs per gallon of gasoline and diesel. Energy use associated with area sources, such as natural gas consumption (for space and water heating), water consumption, electricity, wastewater, and solid waste removal was estimated based on CalEEMod default energy consumption factors (kWh of electricity and therms of natural gas) for the proposed land use (see Table 4.6-9). These assumptions were also used in both the air quality and GHG analyses. The assumptions and emission and energy calculations for project operations can be found in Appendix C.

Table 4.6-9. Annual Energy Generation Rates

Use	Electricity (kWh) ²	Natural Gas (therm)	Unit
Hotel	18,063	841	Per room
Restaurant	37,820	1,741	Per tsf
Convention and Meeting Space	15,150	321	Per tsf

Source: Appendix C.

kWh = kilowatt-hour; tsf = thousand square-feet. Generation rates are based on CalEEMod defaults for hotel, restaurant, and office uses.

Transportation-Related Energy Use

Energy usage associated with fuel consumption was calculated by converting CO₂ emissions estimated from the construction analysis using the rate of CO₂ emissions per gallon of combusted gasoline (8.78 kilograms/gallon) and diesel (10.21 kilograms/gallon) (Climate Registry 2018). The estimated fuel consumption was converted to BTUs, assuming an energy intensity of 113,927 BTUs per gallon of gasoline and 129,488 per gallon of diesel, and electricity was converted to BTUs assuming an energy intensity of 3,416 BTUs per kWh (Argonne National Laboratory 2015).

4.6.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of impacts associated with GHG emissions and energy use resulting from the proposed PMPU. The determination of whether a GHG emissions and energy use impact would be significant is based on the thresholds described below, and the professional judgment of the District as Lead Agency based upon substantial evidence in the administrative record.

Impacts are considered significant if the proposed PMPU would result in any of the following.

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.
3. Result in wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
4. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The State CEQA Guidelines do not indicate what amount of GHG emissions would constitute a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence (State CEQA Guidelines Sections 15064.4(a) and 15064.7(c)). The State CEQA Guidelines provide the lead agency discretion whether to quantify GHG emissions resulting from a project and/or rely on a qualitative analysis or performance-based standards, focusing specifically on the following factors (State CEQA Guidelines Sections 15064.4(b):

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project GHG emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The lead agency must include substantial evidence linking statewide goals, strategies, and plans to the project's findings.

Several agencies throughout the state, including multiple air districts, have drafted and/or adopted varying threshold approaches and guidelines for analyzing GHG emissions and climate change in CEQA documents. Although these threshold approaches and guidelines are binding only within the jurisdiction of the adopting agencies, they may be considered for application by other agencies pursuant to State CEQA Guidelines Section 15064.7(c).

GHG Threshold Approach

Overview

There are multiple potential thresholds and methodologies for evaluating project-level GHG emissions consistent with CEQA, depending on the circumstances of a given project. Although efforts at framing GHG significance issues have not yet coalesced into any widely accepted set of numerical significance thresholds across the state and within the region, a range of possible approaches do exist. Common threshold approaches include (1) compliance with a qualified GHG reduction strategy, (2) performance-based reductions, (3) numeric "bright-line" thresholds, (4) efficiency-based thresholds, and (5) compliance with regulatory programs.

The proposed PMPU includes a variety of project components and a mixture of land uses, including commercial recreation, commercial, recreational boating, parks, streets, and bikeways. Recent case

law directs GHG analyses to tailor threshold concepts to the specifics of a project and that project's uses. While no numeric or efficiency threshold has been formally adopted for use in the region, numerical targets can be derived from published documentation, such as a CAP, for uses where a defensible numeric CEQA threshold can be developed. An efficiency metric is most appropriate for projects that include some form of occupancy by which to benchmark emissions. For example, the District's CAP includes an inventory of baseline and future year emissions, square footage, number of rooms, and emissions associated with "lodging" uses under 2006 and 2020 conditions. In this case, it would be appropriate to benchmark emissions with the number of rooms for years that data is available (in this case, 2006 and 2020), and are based on the level of emissions (MTCO_{2e}) emitted per unit of activity or development (e.g., in this case, the number of hotel rooms). Another example would be the recommended efficiency goals stated in CARB's 2017 Scoping Plan of no more than 6 MTCO_{2e} per capita by 2030 and no more than 2 MTCO_{2e} per capita by 2050 for projects or plans with residential uses. The benefit of efficiency metrics is that they allow for a quantitative demonstration that a project would be in line with and support the State's overall reduction trajectory towards long-term reduction targets. For these project types, where numeric thresholds have not been established and there is no feasible way to develop efficiency thresholds, the best approach is to rely on regulatory consistency to demonstrate if a project is consistent with those statewide GHG emission reduction targets, and the programs to achieve the reduction target have been adopted by CARB or other State agencies. A lead agency can rely on regulatory consistency to show a less-than-significant GHG impact if a project is consistent with statewide GHG emission reduction targets and those programs adopted to achieve them by CARB or other State agencies. However, such analysis is only applicable within the area governed by the regulations. For example, consistency with regulations addressing building efficiency would not suffice to determine that the project would not have significant GHG emissions from transportation.

The OPR's guidance (2018) specifies that a "land use development project that produces low VMT, achieves applicable building energy efficiency standards, uses no natural gas or other fossil fuels, and includes Energy Star appliances where available, may be able to demonstrate a less-than-significant greenhouse gas impact associated with project operation." To the extent the District CAP and PMP policies applicable to GHGs comply with or exceed the statewide GHG emission reduction targets and the regulations outlined in the 2017 Scoping Plan and adopted by the District, CARB, or other agencies, the project could appropriately rely on consistency with these documents to demonstrate consistency with statewide plans, policies, and regulations aimed at reducing GHG emissions. The proposed PMPU's consistency with regulatory programs is used to evaluate the significance of the proposed PMPU.

While the regulatory framework to achieve long-term (post-2030) emissions reductions is in its infancy, many of the programs outlined in the District's CAP and the 2017 Scoping Plan are likely to be carried forward or have already been adopted with post-2030 requirements (e.g., RPS). Accordingly, evaluating PMPU consistency with these programs and relevant guidance published by OPR and CARB for the reduction of long-term emissions is also considered in the analysis of full buildout (2050) emissions.

GHG Approach Used in This PEIR

The State has formally adopted reduction targets for years 2020 (AB 32) and 2030 (SB 32), and EOs exist for years 2045 (EO B-55-18) and 2050 (EO S-03-05). The proposed PMPU is expected to guide development within the District's jurisdiction through 2050. The next statewide milestone year after

plan adoption is 2030, and, as discussed above, the State has developed a Scoping Plan to meet the 2030 reduction goal. At this time, the 2045 and 2050 targets have not been codified into law, and the State does not have a plan to meet these targets. However, buildout of the proposed PMPU will occur through the 2050 timeframe. Thus, the impact analysis considers buildout of the proposed PMPU based on two separate benchmark timeframes. The first timeframe considers implementation of the proposed PMPU through 2030, whereas the second considers implementation beyond 2030 through the year 2050.

Based on the questions posed in Appendix G of the State CEQA Guidelines, this PEIR analyzes the significance of potential impacts associated with GHG emissions under two thresholds: (1) whether future development under the proposed PMPU would generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment; and (2) whether the proposed PMPU would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

The analysis of potential impacts under these thresholds for the 2030 and post-2030 periods are both quantitative and qualitative in nature. Under Threshold 1, the quantitative portion of the analysis includes quantification of emissions from new development under the proposed PMPU consistent with long-term local and statewide reduction targets. Under Threshold 2, the qualitative portion of the analysis assesses policy inconsistencies between the proposed PMPU and plans, policies, measures, and regulatory programs outlined, adopted, or proposed by all relevant agencies, including the District, CARB, and other California agencies. These two approaches are discussed in further detail below.

Generate a Significant Amount of GHG Emissions

The quantitative threshold approach used to determine whether the proposed PMPU would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment is two-pronged for both the 2030 and 2050 analysis years.

For threshold 1, impacts from the buildout of the proposed PMPU would be considered significant if the proposed PMPU would:

- A. Result in an increase in GHG emissions relative to baseline (2016) GHG emissions under both 2030 and 2050 conditions, or
- B. Be inconsistent with the State's overall reduction target for 2030 (SB 32) or inconsistent with the State's ability to achieve its overall reduction target for 2050 (EO S-03-05).

The analysis for both of these methods is quantitative. The first method quantitatively considers whether buildout of the proposed PMPU would result in a net increase in GHG emissions relative to baseline (2016) GHG emissions under both 2030 and 2050 conditions. Under the second method, the analysis for 2030 is quantitative with respect to SB 32 consistency. The quantitative analysis for 2030 is based on a quantitative 2030 emissions target that aligns with the State target.

The quantitative analysis also uses a post-2030 emissions reduction goal that aligns with the State's trajectory and scientific consensus. A discussion of these 2030 and post-2030 numerical reduction targets is provided below.

GHG Reduction Targets Used in This PEIR

The first method considers whether buildout of the proposed PMPU would result in a net increase in GHG emissions relative to baseline conditions. The second method considers numerical targets to determine whether new development under the proposed PMPU would generate emissions in line with the 2030 reduction target (SB 32) and post-2030 (EO B-55-18 and EO S-03-05) reduction goals.

Consistent with OPR (2018), an efficiency metric (e.g., emissions per capita, emissions per service population) allows agencies to compare projects of various types, sizes, and locations equally, and determine whether a project is consistent with the State’s reduction. Normalizing by the number of hotel rooms serves the same purpose, in that it allows the District to compare projects of various sizes equally.

Consistent with OPR and case law, the numerical efficiency targets used herein are based local emission reductions goals and development projections for 2020 from the District’s CAP, which are equal to 1990 levels, continued growth in development, and emission reductions required to meet the statewide reduction targets for 2030 and post-2030.

The numerical efficiency targets were estimated using the emission and development projections for the lodging sector within the District’s CAP for 2020. The 2030 and 2050 efficiency targets are based on the level of reductions and overall efficiency required to meet the 2030 reduction target (SB 32) and post-2030 (EO B-55-18 and EO S-03-05) reduction goals based on the lodging emissions goal for 2020 and the development projections for 2020 within the District’s CAP. Consistency with these numerical efficiency targets is used to determine impacts for new development under the proposed PMPU. Note that the new development under the proposed PMPU includes not only lodging, but also commercial uses—such as retail, restaurants, and meeting space—that support lodging (hotel) uses. Use of a lodging-specific target allows for all emissions to be captured in a single analysis.

The efficiency metric is based on the amount of emissions divided by the number of rooms, resulting in a metric on an emissions-per-room basis. The equation is shown below.

$$\text{Efficiency Metric (GHG per room)} = \frac{\text{Emissions}}{\text{Number of Hotel Rooms}}$$

For each analysis year, the level of emissions to achieve the fair share toward the statewide targets (numerator) and the number of hotel rooms (denominator) need to be estimated.

The District’s CAP includes an inventory of baseline and future year emissions, square footage, occupied rooms, and lodging emissions for baseline (2006) and 2020 business-as-usual (BAU) conditions. The CAP also identifies the 2020 GHG reduction target (1990 levels, or 10 percent below 2006 levels).

The number of hotel rooms from the CAP for 2006 and 2020 serve as the basis for calculating the efficiency target for 2030, while the 2050 target is based on the State’s carbon neutrality goal.

The calculation methods for emissions and hotel rooms and overall metric calculation is provided below.

Emission Targets

The CAP assumes 137,429 MTCO_{2e} from lodging based on 4,793 hotel rooms in 2006. The CAP assumes 249,852 MTCO_{2e} from lodging based on 8,927 hotel rooms in 2020. Based on these numbers, the following emission targets were calculated based on the statewide 2030 target and post-2030 goals:

- The 2020 reduction target for lodging uses is estimated to be 124,004 MTCO_{2e}, based on a 10-percent reduction in emissions from 2006 levels (137,429 MTCO_{2e} * (1-10 percent)). The 2020 reduction target represents the District's 1990 estimate, consistent with CARB's calculation approach for its 2020 target per AB 32.
- The 2030 reduction target for lodging uses is estimated to be 74,402 MTCO_{2e}, based on a 40-percent reduction in emissions from 1990 levels (124,004 MTCO_{2e} * (1-40 percent)), consistent with CARB's calculation approach for its 2030 target per SB 32.
- The 2050 reduction target for lodging uses is assumed to be 0 MTCO_{2e}, based on the statewide carbon neutrality goal for 2045.

Hotel Rooms

The CAP is based on 4,793 hotel rooms in 2006 and 8,927 hotel rooms in 2020. This rate of growth equates to 295 new rooms per year, and it was assumed that growth in hotel rooms over the life of the PMPU will be consistent with historical rate of growth. Based on this same rate of growth, the following room estimates were calculated:

- The 2030 estimate for hotel rooms is 11,880 hotel rooms, based on growth trends in the CAP.
- The 2050 estimate for hotel rooms is 17,786 hotel rooms, based on growth trends in the CAP.

Hotel Room Metric Calculation

As shown above, the efficiency metric is based on the level of emissions by the level of hotel rooms for each year, as follows:

- The 2030 efficiency metric target 74,402 MTCO_{2e} divided by the 11,880 hotel rooms, which equates to 6.3 MTCO_{2e} per room.
- The 2050 efficiency metric target 0 MTCO_{2e} divided by the 17,786 hotel rooms, which equates to 0.0 MTCO_{2e} per room.

The efficiency of emissions associated with the proposed PMPU are calculated in the same manner as the efficiency metrics. For each year, the level of emissions is divided by the number of hotel rooms assumed to be developed by 2030 and 2050, respectively.

Conflict with Plans, Policies, or Regulations for Reducing GHG

The threshold approach used to determine whether the proposed PMPU would conflict with plans, policies, or regulations for reducing GHG emissions is two-pronged for both the 2030 and 2050 analysis years. For threshold 2, impacts from the buildout of the proposed PMPU would be considered significant if the proposed PMPU would:

1. Conflict with regulatory programs outlined in the 2017 Scoping Plan and adopted by CARB or other California agencies for 2030.

2. Conflict with regulatory programs outlined in the 2017 Scoping Plan and adopted by CARB or other California agencies for post-2030.

The analysis for both 2030 and 2050 discusses whether or not the proposed PMPU would conflict with the regulatory programs outlined in existing CARB documentation for achieving reductions by 2030, as well as those that will continue to reduce emissions through 2050, including the District's CAP, the Scoping Plan, the Mobile Source Strategy, and other documents adopted or discussed by CARB or other California agencies. The proposed PMPU is considered consistent with these plans if the PMPU meets the general intent of these plans and does not obstruct attainment of the other plan's goals and policies. As discussed in Section 4.9, *Land Use and Planning*, the proposed PMPU is considered consistent with the provisions of the identified regional and local plans if it meets the general intent of the applicable plans. . Additionally, in reaching such consistency conclusions, the District may also consider the consequences of denial of a project, which can also result in other policy inconsistencies. The analysis below provides a brief overview of the most relevant planning documents and their primary goals. However, the District's consistency conclusions are based upon the planning documents as a whole.

4.6.4.3 Proposed PMPU Policies that May Avoid or Reduce Impacts

The following proposed PMPU policies would have the potential to reduce or avoid impacts associated with consistency with GHG reduction targets and goals and are considered in the impact analysis that follows.

Mobility Policy 1.1.8 The District shall coordinate with agencies that have transportation authority, and with adjacent jurisdictions and permittees, to plan shared mobility infrastructure in support of the safe movement of people and/or goods. Specific transit improvements included in this Plan are outlined in *Chapter 5, Planning Districts*, including any planned improvements within the applicable planning district or subdistrict.

Mobility Policy 1.1.9 The District shall coordinate with agencies that have transportation authority to explore opportunities to expand accessible transit service to Tidelands. Specific transit improvements included in this Plan are outlined in *Chapter 5, Planning Districts*, including any planned improvements within the applicable planning district or subdistrict.

Mobility Policy 1.1.11 The District shall develop Transportation Demand Management (TDM) guidelines and require development to comply with such guidelines, with the intent to reduce dependence on single-occupancy vehicles and reduce miles traveled to, from, and within Tidelands. All proposed development shall also be required to provide a project-specific TDM program in accordance with the District's guidelines.

Mobility Policy 1.1.19 The District shall prepare a curbside management program that will provide strategies and guidelines for the use of curb space along corridors fronted by predominantly commercial uses.

Mobility Policy 1.1.20 Development shall implement curbside management strategies in accordance with the District's curbside management program, once established.

Mobility Policy 2.2.3 The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers to identify and

implement feasible sustainable freight strategies in accordance with District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives.

Mobility Policy 2.2.4 The District shall engage with railroad operators and agencies that have transportation authority to maintain, enhance, and expand access between the cargo terminals and the regional freight infrastructure.

Mobility Policy 2.2.5. The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, and regional transportation agencies, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to, roadways, rail, and pipelines, to enable efficient movement of goods along those networks and to support the working waterfront.

Mobility Policy 2.2.6 The District and permittees shall optimize off-terminal land-based freight networks to maintain, enhance, and expand the vitality of the working waterfront.

Mobility Policy 2.2.7 In coordination with operators and stakeholders, the District shall plan for improvements to railroad corridors, such as spurs, rail storage facilities, switching facilities, and suitable rail trackage within the working waterfront, both on dock and near dock, to better interface the movement of cargo between ship and land carriers.

Ecology Policy 3.1.1 Permittees shall implement programs and activities that reduce exposure to toxic air contaminants and criteria air pollutants in and adjacent to Tidelands.

Ecology Policy 3.1.2 The District shall encourage development to implement clean air action measures such as:

- Efficient buildings design features
- Alternative powered vehicles, vessels and advanced technologies
- Parking management programs
- Alternative transportation programs
- Energy efficient lighting
- Native tree planting and landscaping

Ecology Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality.

Ecology Policy 4.2.1. The District shall continue environmental education programs to increase public understanding and appreciation of Tidelands' and the Bay's natural resources, and how to protect them.

EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science.

The following proposed PMPU policies would have the potential to avoid or reduce impacts associated with energy and are considered in the impact analysis that follows.

SR Policy 3.1.3. Permittees of development shall deploy renewable energy technology to improve energy reliability and economic resilience, where feasible.

SR Policy 3.1.5. The District shall continue to coordinate with Tidelands’ tenants and adjacent local businesses to reduce resource consumption and promote sustainable operations.

SR Policy 3.1.6. The District shall promote the innovative use of “green” design for new or retrofitted Tidelands’ buildings, structures, and facilities.

SR Policy 3.1.7. Development shall include water conservation strategies to save water and energy on-site, where feasible.

ECON Policy 1.2.4. The District shall explore the creation of, and allow for the use of, different financing mechanisms to help fund the building of new infrastructure or improvement to existing infrastructure, including multimodal transportation facilities, water and stormwater systems, information and communication systems, and public space.

ECON Policy 2.3.2. The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions.

4.6.4.4 Project Impacts and Mitigation Measures

Threshold 1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Analysis

Impacts of Water and Land Uses

Construction and operation of the proposed PMPU would have the potential to create significant impacts associated with the emission of GHGs. A discussion of project-related impacts is presented below.

Construction

The proposed PMPU serves as a long-term planning blueprint for future development within several planning districts. Approval of the PMPU would not include approval of any specific development project, including the construction of any buildings or infrastructure. It is reasonably foreseeable, however, that future construction activities would result from future development projects that meet the water and land use designation requirements and abide by the policies and standards set forth by the proposed PMPU. Specifically, buildout of the proposed PMPU would include the construction of new hotels and lower cost accommodations, restaurants, park space and promenades, retail, convention and meeting space, and other uses that either are water dependent or help to enhance the waterfront experience. In-water uses would include additional vessel activity associated with more slips and docks with waterside uses that include anchorage, commercial fishing berthing, industrial and deep-water berthing, marine services berthing, navigation corridors, recreational berthing, and sportfishing berthing facilities. Although implementation of the proposed PMPU would increase the construction activity in the proposed PMPU area, buildout of the proposed PMPU would take place over a long-range timeframe, and construction activities would occur periodically throughout that timeframe.

Table 4.6-10 presents the estimated construction emissions from implementation of the proposed PMPU assuming construction of all proposed development shown in Table 4.2-12 and 4.2-15 of Section 4.2. Emissions are amortized over the 30-year life of the proposed PMPU and added to the operational emissions below.

Table 4.6-10. Construction Emission Estimates Associated with All Development– Unmitigated (total metric tons for all construction)

Phase	MTCO_{2e}
Demolition	1,285
Site Preparation	209
Grading	872
Building Construction	55,746
Paving	274
Architectural Coating	327
Waterside Construction	4,267
Total Emissions	62,981
<i>Amortized (Annual) Emissions</i>	<i>2,099</i>

Source: Appendix C.

Note: Emissions may not add exactly due to rounding. Assumes all development amortized equally over 30-year period.

MTCO_{2e} = metric tons of carbon dioxide equivalent.

As shown in Table 4.6-10, the majority of GHG emissions during construction would result from equipment vehicles associated with building construction as well as equipment associated with waterside construction, which is assumed to involve numerous in-water and landside construction pieces, such as tugboats, pushboats, small support boats, and cranes. Each slip project is assumed to take 3 months, and it is assumed that only one such project would occur at a time.

Note that construction emissions would primarily occur in PD2 and PD3, as they would see the most development under the proposed PMPU.

The quantitative modeling above represents potential scenarios for how construction may occur. However, the proposed PMPU is a long-range plan that does not propose any specific development projects and, therefore, does not include a specific buildout schedule. Instead, the exact timing and sizes of future development under the proposed PMPU would be driven by market conditions, and construction of future land use developments would occur intermittently throughout the course of the buildout period. Construction of landside uses would result in emissions due to construction equipment exhaust, haul and delivery trucks, and worker vehicles. Construction of waterside uses may be passive and not include much activity, while some, such as activities to construct additional slips, would include use of in-water equipment such as tugboats, survey vessels, skiffs, and other types of equipment to remove, move, and install waterside features. Construction emissions for individual projects would be temporary, and the total duration would vary from project to project. As the timing and intensity of future development projects is as yet unknown, the precise effects of construction activities associated with buildout of the proposed PMPU cannot be determined at this time. Potential impacts associated with the GHG emissions from the construction of individual future projects would be analyzed on a case-by-case basis as part of future CEQA analyses of individual future projects pursuant to State CEQA Guidelines Section 15168.

Given the current lack of information regarding the timing and design of future construction projects, it is uncertain whether construction activities from individual components would result in emissions that would be consistent with State reduction targets. Given the cumulative nature of GHG emission and climate change, effects of construction-related GHG emissions are not analyzed in isolation, but are instead amortized over the 30-year life of the proposed PMPU and combined with the effects of long-term operations below.

Operation

Table 4.6-11 summarizes emissions by source compared against the numerical targets associated with new development under the proposed PMPU assuming construction of all proposed development shown in Tables 4.2-12 and 4.2-15 of Section 4.2. As shown, new development would exceed the numerical efficiency targets in both 2030 and 2050. This is considered a significant impact prior to mitigation (**Impact-GHG-1**).

Table 4.6-11. Unmitigated Operational Emissions Associated with New Development under the PMPU Buildout (MTCO_{2e} per year)

Sector	Source	2030 Unmitigated	2050 Unmitigated
Land Use Development	Mobile	3,143	6,620
	Electricity	6,103	0
	Natural Gas	8,781	21,406
	Water	425	358
	Waste	1,340	3,268
Boating	Recreational Boating	266	743
	Commercial Fishing	48	119
<i>Amortized Construction</i>		<i>2,099</i>	<i>2,099</i>
Total Annual for All Development		22,205	34,614
Number of Occupied Rooms		1,604	3,910
Emissions Per Room (MT/Room)		13.8	8.9
Threshold (MT/Room)		6.3	0.0
Target Met?		No	No

The proposed PMPU would achieve additional GHG reductions through policies that encourage alternative transportation, efficient building design, sustainable freight, and other GHG-reducing measures. However, GHG emissions reductions of these strategies were not quantified because the exact number of installed systems, affected structures, and affected visitor trips is currently unknown.

New development would primarily occur in PD2 and PD3. As shown in Table 4.6-11, emissions from new development would increase in both 2030 and 2050. Moreover, the increase in GHG emissions would exceed the efficiency target for both 2030 and 2050, which would be considered a significant impact prior to mitigation for both 2030 and 2050 (**Impact-GHG-1**).

Land use development would increase over time, resulting in an increase in emissions in PD1, PD2, PD3, PD4, PD8, PD9, and PD10. While emissions on a per unit or activity basis (e.g., per vehicle mile traveled) decrease over time as vehicles and vessels become more efficient, emissions would still

increase because the increase in activity would outweigh the decrease in emissions on a per-activity basis.

The increase in emissions would be associated with new motor vehicle trips, energy use, waste disposal and water consumption, recreational boating, and commercial fishing.

Emissions from land use development are tied to the increase in vehicle trips and utility consumption associated with new hotel uses, restaurant uses, and meeting space. Emissions per unit of activity from these sources would decrease over time due to implementation of regulations to improve fuel economy and increase renewables in the electrical grid, but the increase in activity associated with buildout under the proposed PMPU still results in an increase in GHG emissions. Emissions from land use development would primarily occur in PD2 and PD3, with minor amounts in PD8.

The increase in emissions from recreational boating is due entirely to the increase in the number of slips to be added in PD1, PD2, PD3, PD9, and PD10. There are currently no regulations in place to reduce GHG emissions from recreational boating. As discussed in Section 4.2, CARB is working on a recreational marine vessel regulation to limit emissions from marine engines that contribute to air quality violations, but it is unclear at this point if this regulation would reduce fuel consumption or GHG emissions. Rulemaking for this is expected to take a few years (CARB 2021a).

The change in fishing would increase emissions over time in PD1, due to the increase in slips. The change in recreational boating would increase emissions over time in PD1, PD2, PD3, PD9, and PD10 due to the increase in slips. For both fishing and recreational boating, the increase in emissions is due solely to the increase in activity. There are currently no regulations in place to reduce emissions from commercial fishing or sport fishing. As of 2021, the existing CARB Commercial Harbor Craft rule (CARB 2008) exempts various harbor craft from the rule, including, but not limited to, commercial fishing, sport fishing (called *commercial passenger fishing* in all of CARB's rulemaking), work boats, and pilot vessels. CARB's most recent Proposed Concepts for Commercial Harbor Craft proposed extending the rule to sport fishing, commercial fishing, work boats, and pilot vessels (CARB 2021c). This rule would require all in-use sport fishing vessels to be equipped with Tier 4 engines by 2030 at the latest, all commercial fishing vessels to be equipped with Tier 2 engines between 2030 and 2032, and all harbor craft to use renewable diesel. This rule is expected to be considered by the CARB board in early 2022, and take effect in 2023. Because this rule is currently in draft form, the associated emissions reductions are not quantified.

The increase in operational GHG emissions associated with PMPU buildout would not occur immediately and all at once, but would instead occur incrementally over time as statewide emissions decline and regulations to reduce emissions from Port-related sources take effect.

As noted, **Impact-GHG-1** would be significant. **MM-AQ-2**, **MM-AQ-3**, and **MM-AQ-6** through **MM-AQ-12**, which are proposed to mitigate air quality and health risk impacts (Section 4.2), also would reduce GHG emissions associated with buildout of the proposed PMPU. A discussion of operational mitigation measures and their effect on GHG emissions is presented below.

- **MM-AQ-2** requires construction best practices, including maintaining construction equipment in proper working condition, minimizing idling time, and promoting measures to reduce construction worker commute trips. While these measures could reduce GHG emissions by ensuring equipment is operating as efficiently as possible, the extent of emission reductions due to **MM-AQ-2** cannot be quantified and is likely to be small in scale.

- **MM-AQ-3** requires all off-road equipment to use renewable diesel fuel and meet Tier 4 emissions standards, depending on when construction occurs. These measures could marginally reduce GHG emissions and improve fuel economy because modern equipment incorporates efficient design that reduces fuel consumption. There are no quantifiable GHG reductions associated with higher tiered engines but there are marginal fuel economy benefits due to their efficient design. Furthermore, this measure requires the use of zero or near-zero emission construction equipment as it become commercially available over the life of the proposed PMPU.
- **MM-AQ-6** requires all harbor craft or dredgers used to construct new slips to use renewable diesel fuel and meet Tier 3 or 4 emissions standards, or use zero emission pieces, depending on when construction occurs and the availability of pieces. These measures would reduce GHG emissions if zero emission fully electric pieces are used. As fully electric harbor craft become more prevalent, their usage during construction activities will increase. GHG reductions cannot be quantified given that specific construction timing and fleet mix are unknown at this time.
- **MM-AQ-7** is related to **MM-AQ-6** in that this measure obligates the District to track the rollout of zero or near-zero (i.e., hybrid) harbor craft pieces both within San Diego Bay and within nearby ports. Zero or near-zero (i.e., hybrid) harbor craft pieces substantially reduce (or eliminate) all GHG emissions. Their usage over time will increase as new pieces become available within the Bay and nearby. GHG reductions are potentially substantial, but cannot be quantified given that specific construction timing and fleet mix are unknown at this time.
- **MM-AQ-8** requires future project proponents to document and track activities and emissions to ensure that projects do not exceed daily thresholds individually or in combination with other projects being implemented as part of the proposed PMPU. These measures require reporting to the District and changes to the overall construction schedule if emissions would exceed thresholds.
- **MM-AQ-9** requires all tenants to implement sustainability measures in building design through 2030, and **MM-AQ-10** requires all development to be carbon neutral after 2030. Both measures will reduce emissions from new development by reducing energy and water consumption and waste generation. The push for carbon neutral design will increase over time and become more standard practice during the life of the proposed PMPU. This measure has been quantified and assumes that, in 2030, new hotel uses only consume natural gas associated with cooking, which reduces natural gas consumption from new hotels 90 percent, or reduces emissions equivalent to this reduction through implementation of other strategies. Beyond 2030, it is assumed that all new development will be carbon neutral and will not increase natural gas consumption beyond that assumed in 2030.
- **MM-AQ-11** requires the District to develop and implement an EV charging program, and to require future development to incorporate EV charging into project design. Installing EV chargers is a supplemental measure in that it does not directly reduce emissions itself, but instead supports local, regional, and statewide efforts to increase usage of zero emission electric vehicles. While the emission reductions associated with this measure have not been quantified in the mitigated emissions analysis because details regarding this measure (e.g., location, usage per day) have not yet been developed, a preliminary estimate is that the 421 publicly accessible chargers in 2030 could reduce new GHGs by 2.3 percent, and the 507 publicly accessible chargers in 2050 could reduce new GHGs by 1.4 percent assuming all new vehicle trips have access to these chargers (i.e., they are in high-traffic areas) and assuming four vehicles access

each charger on a daily basis (CARB 2019b, NREL 2014). While these emission reductions are shown here, the emission reductions have not been applied to mitigated emissions analysis.

- **MM-AQ-12** requires marina operators to install dockside electrical infrastructure for boats to plug into when docked. CARB notes that there are opportunities to electrify many recreation boats, specifically small outboard engines (less than 19 kW). Many of these options are drop-in ready. The marina operators shall install dockside electrical infrastructure and will promote public awareness. This measure will reduce all emission types. This measure has not been quantified because the specifics regarding this measure have not yet been developed.

A large portion of baywide electricity is purchased through Direct Access, which refers to electricity purchased directly from an electric service provider instead of a regulated electric utility, like SDG&E. In many cases, if the sources of energy from the electric service provider are unknown, a default emission rate from CPUC is assumed. This default emission rate is much higher than SDG&E's emission rate.

- **MM-GHG-1** requires all future tenants to ensure that all electricity obtained is completely provided by renewable sources (i.e., carbon free) by 2030. This will ensure that electricity-related emissions trend down over time and faster than the SDG&E grid, which has a 2045 timeline for net-zero grid generation.
- **MM-GHG-2** requires the District to replace its fleet with zero emissions vehicles by 2030, or when commercially available for specialized fleet vehicles. Over time this will lead to a decrease in GHGs eventually down to zero overall emissions once the fleet is fully replaced. This measure has not been quantified because specifics regarding which existing vehicles are replaced, and when specialized fleet vehicles will be available, is not yet known.

Other efforts are underway that will help to reduce emissions from the proposed PMPU, as described below.

The MCAS is discussed in detail in Section 4.2, and includes various air quality and GHG emission reduction goals, with strategies to achieve those goals. Most of the measures in the MCAS go beyond regulatory requirements, and will achieve emission reductions at the two cargo terminals; the Cruise Ship Terminal (CST); along the entire Working Waterfront; and with the District's fleet of vehicles, equipment, and marine vessels. The Draft Revised MCAS was released for public review in August 2021, and was adopted by the District Board in October 2021. The goals and strategies will guide the District's investments in zero emissions technology and electrification and will allow the District to help tenants and terminal operators prioritize replacements over time. As noted in the MCAS document, the MCAS is intended to guide future decision-making and provide a planning framework for potential future actions that may be implemented to achieve the goals and objectives identified in the MCAS. The MCAS focuses on maritime and shipyard activities. Measures from both the MCAS and potentially the CERP will be applicable to new projects as they arise.

Numerous PMPU policies and objectives will support GHG reduction efforts. Specifically, SR Objective 3.1 states that the District will aim to reduce GHG emissions and support pathways toward carbon neutrality. SR Policy 3.1.1 states that the District shall periodically update the District's CAP to ensure alignment with this Plan and with the District and State goals and targets for GHG emissions, shall start the CAP's update no later than within 2 years of the effectiveness of the certification of this Plan, and may periodically update the District's CAP thereafter.

While the MCAS, future CAP updates, and other District efforts are likely to result in emission reductions over the life of the proposed PMPU, the effects of the GHG emission reductions that may result from these efforts cannot be quantified at this time because the timing and other specific details about the implementation of these efforts are not known at this time.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, *Project Description*, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact associated with the generation of GHG emissions that would exceed the reduction targets for both 2030 and 2050 (**Impact-GHG-1**). This significant impact would still occur within PD3 under Option 1, as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 1 would include the same water and land uses for PD3 analyzed above, and operations that would occur for Option 1 would fall within the range of scenarios analyzed above. Option 1 would not include new uses that generate substantial emissions, and would not change the construction and operational assumptions. GHG emissions associated with reconfiguring and closing of North Harbor Drive, construction of a Waterfront Destination Park, and other improvements to open space would be similar to the analysis above. Option 1 could result in construction and operational emissions that are similar to those identified for the proposed project and, therefore, could generate GHG emissions that would exceed the reduction targets for both 2030 and 2050, which would be considered a significant impact (**Impact-GHG-1**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact associated with the generation of GHG emissions that would exceed the reduction targets for both 2030 and 2050 (**Impact-GHG-1**). This significant impact would still occur within PD3 under Option 2, as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would include the same water and land uses for PD3 analyzed above, and operations that would occur for Option 2 would fall within the range of scenarios analyzed above. Option 2 would not include new uses that generate substantial emissions and would not change the construction and operational assumptions. Operation of additional Recreation Open Space and the expansion of the Lane Field Setback Park would be similar to the analysis above. Option 2 could result in construction and operational emissions that are similar to those identified above and, therefore, could generate GHG emissions that would exceed the reduction target for both 2030 and 2050, which would be considered a significant impact (**Impact-GHG-1**). However, this

would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact associated with the generation of GHG emissions that would exceed the reduction targets for both 2030 and 2050 (**Impact-GHG-1**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would include the same water and land uses for PD3 analyzed above, and operations that would occur for Option 3 would fall within the range of scenarios analyzed above. Option 3 would not include new uses that generate substantial emissions, and would not change the construction and operational assumptions. GHG emissions associated with realignment of North Harbor Drive and the additional Recreational Open Space would be similar to the analysis above. Option 3 could result in construction and operational emissions that are similar to those identified above and, therefore, could generate GHG emissions that would exceed the reduction target for both 2030 and 2050, which would be considered a significant impact prior to mitigation (**Impact-GHG-1**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Tenth Avenue Marine Terminal

Since the TAMT EIR was certified in December 2016, several regulations have been adopted that will affect long-term GHG emissions at TAMT. Note that the proposed PMPU would not result in any changes in land use or cargo throughput at TAMT. Existing maritime activities would be unaffected, and any future improvements at TAMT would be subject to the mitigation in the TAMT PEIR.

In June 2020, CARB adopted the Advanced Clean Truck Regulation, which promotes zero-emission technology penetration with sales requirements for medium- and heavy-duty truck manufacturers. In August 2020, CARB expanded the At Berth Regulation to other vessels, although the impact on TAMT may be small given that container ships were already covered and TAMT rarely if ever sees the type of vessels that were added (roll-on/roll-off, auto carries, tankers). In September 2020, Governor Newsom signed EO N-79-20, which established various zero-emission goals, including a goal that 100 percent of new passenger car and trucks sales be zero-emission by 2035, all drayage trucks be zero-emission by 2035, all off-road equipment be zero-emission where feasible by 2035, and the remainder of medium- and heavy-duty vehicles be zero-emission where feasible by 2045. Under the EO, CARB is tasked to work with other State agencies to develop regulations to achieve these goals while accounting for technological feasibility and cost effectiveness. While the goals under this EO are not law, it is likely that CARB will adopt rules per this EO in the coming years (CARB 2017a). These regulations are discussed in Section 4.2 as well.

Additionally, CARB adopted or proposed other measures or orders aimed specifically at reducing GHG emissions and moving towards decarbonization of the economy. In 2018, the Governor adopted EO B-55-18, which established a new statewide goal of achieving carbon neutrality no later than 2045. Also adopted in 2018, SB 100 establishes a goal of 100 percent zero-carbon energy sources by 2045.

These regulations will affect emissions from TAMT in several ways. In particular, the emission estimates associated with buildout of the TAMT Redevelopment Plan in 2035 are likely overstated in that regulations to reduce emissions from vessels, trucks, and electricity from both shore power and other uses do not incorporate the newly adopted rules that will require substantially reduced emissions. Over the long-term, emissions from some sources, such as trucks and shore power, may effectively be zero, which was not assumed in the TAMT EIR.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not generate GHG emissions that would have a significant impact on the environment or conflict with the State's emission reduction target for 2030 (project-adjusted to 33 percent), the State's 80 percent emission reduction goal for 2050, or the State's carbon neutrality goal for 2045. Rather, the proposed PMPU policies listed in Section 4.6.4.3, *Proposed PMPU Policies that May Avoid or Reduce Impacts*, would reduce potential impacts related to GHG emissions by:

- Committing the District to developing TDM guidelines and requiring development to comply with such guidelines, with the intent to reduce dependence on single-occupancy vehicles and reduce VMT to, from, and within Tidelands (Mobility Policy 1.1.11).
- Engaging with stakeholders—such as railway companies, trucking companies, cargo and freight shipping lines, and service providers—to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives (Mobility Policy 2.2.3).
- Maintaining and developing improvements to linkages between the marine terminals and landside networks—including but not limited to roadways, rail, and pipelines—to enable efficient movement of goods along those networks and to support the working waterfront (Mobility Policy 2.2.5).
- In coordination with operators and stakeholders, planning for improvements to railroad corridors—including but not limited to spurs, rail storage facilities, switching facilities, and suitable rail trackage within the working waterfront, both on dock and near dock—to better interface the movement of cargo between ship and land carriers (Mobility Policy 2.2.7).
- Requiring, where feasible, efficient and sustainable dockside operations for ocean-going vessels and freight-related harbor craft (Mobility Policy 2.1.4).
- Encouraging development to implement clean air action measures such as efficient building design features; alternative-powered vehicles, vessels, and advanced technologies; parking management programs; alternative transportation programs; energy-efficient lighting; and native tree planting and landscaping (Ecology Policy 3.1.2).

Impact Determination and Mitigation

Implementation of the proposed PMPU would result in significant impacts associated with GHG emissions.

Significant Impacts

Impact-GHG-1: Inconsistency with the Statewide Reduction Target for 2030 (Project-Adjusted) and Goal for 2050. Proposed PMPU buildout emissions would be inconsistent with the

statewide reduction 2030 target and 2050 goal. Therefore, the contribution of PMPU-related GHG emissions is considered significant.

Mitigation Measures

For **Impact-GHG-1**:

Implement **MM-AQ-2**, **MM-AQ-3**, and **MM-AQ-6** through **MM-AQ-12**, as described under Threshold 2 in Section 4.2, *Air Quality and Health Risk*.

Implement **MM-TRA-1** through **MM-TRA-3**, as described under Threshold 1 in Section 4.14, *Transportation, Circulation, and Mobility*.

MM-GHG-1: Secure All Electricity from Renewable Sources. Prior to the District's approval of any future development project under the proposed PMPU, the project proponent shall ensure that all electricity obtained is provided by renewable sources by 2030. Tenants shall submit evidence of compliance with this requirement annually to the District's Development Services Department. This can be met by purchasing and installing renewable energy systems, power purchase agreements, by opting into carbon-free electricity through an offsite providers, such as Direct Access.

MM-GHG-2. Purchase Alternative Fuel, Electric, or Hybrid Vehicles and Equipment. The District shall replace all fossil-fueled on-road vehicles in its fleet with zero-emission vehicles by 2030. For specialized equipment where zero-emission vehicles are not available, the District shall replace all on-road vehicles in its fleet with the lowest emitting option available.

Level of Significance After Mitigation

As shown in Table 4.6-12, after implementation of **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-12**, and **MM-GHG-1** and **MM-GHG-2**, the proposed project would result in emissions below the numerical target in 2030 but above the carbon-neutrality goal in 2050. However, because CARB has not formally adopted a plan to achieve the carbon neutrality goal set by EO B-55-18, it cannot be stated with certainty that the project would result in emissions that would represent a fair share of the requisite reductions toward the statewide carbon neutrality goal. Therefore, **Impact-GHG-1** would be considered significant and unavoidable after mitigation.

Table 4.6-12. Mitigated Operational Emissions Associated with New Development Under the PMPU Buildout (MTCO₂e per year)

Sector	Source	2030 Mitigated	2050 Mitigated
Land Use Development	Mobile	2,610	5,548
	Electricity	0	0
	Natural Gas	2,058	2,058
	Water	340	286
	Waste	1,340	3,268
Boating	Recreational Boating	266	743
	Commercial Fishing	48	119
<i>Amortized Construction</i>		<i>2,099</i>	<i>2,099</i>

Sector	Source	2030 Mitigated	2050 Mitigated
Total Annual for All Development		8,761	14,122
Number of Occupied Rooms		1,604	3,910
Emissions Per Room (MT/Room)		5.5	3.6
Threshold (MT/Room)		6.3	0.0
Target Met?		Yes	No

Source: Appendix C.

Threshold 2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Analysis

Impacts of Water and Land Uses

Implementation of the proposed PMPU would have the potential to conflict with relevant plans, policies, and regulatory programs that aim to reduce GHG emissions. This analysis qualitatively discusses the proposed PMPU's consistency with relevant plans, including the District's CAP; the CARB 2017 Scoping Plan; and other plans, policies, and regulatory programs adopted, drafted, or recommended by CARB and other agencies.

District CAP

The District's CAP includes numerous measures to reduce GHG emissions from District operations, including both maritime and landside sources. The CAP also considers growth in District-wide activities from all sectors (e.g., maritime, lodging). As discussed above under Threshold 1, the proposed PMPU is expected to result in an increase in activities due to changes in water and land uses within the District. Emissions associated with these changes in activity would result from electricity and natural gas consumption, passenger vehicle travel, water consumption, waste and wastewater generation, recreational boating, and commercial fishing.

The District's CAP includes reduction quantification to meet the 2020 statewide GHG reduction target from AB 32. Many of the measures in the existing CAP will continue to be implemented and result in emission benefits well beyond the 2020 timeframe, and many of the current measures will serve as a starting point in the development of post-2020 reduction measures.

Project consistency with relevant CAP measures is compared in Table 4.6-13. Future development that could occur under the proposed PMPU would not be consistent with the CAP because it would not implement all of the reduction measures, which is considered a significant impact (**Impact-GHG-2**). Future development under the proposed PMPU would be required to implement mitigation measures to ensure consistency with the District's CAP. These measures include relevant emission-reducing measures from the District CAP that reduce emissions green building practices (**MM-AQ-9** and **MM-AQ-10**), and that require the facilitation (**MM-AQ-12**) and purchase of zero-emission vehicles (**MM-GHG-2**). Moreover, future development that could occur under the proposed PMPU would be subject to all applicable mitigation measures identified herein, and design features that reduce GHG emissions will be required as conditions of approval in the Coastal Development Permits issued for such future projects.

Implementation of mitigation would ensure that future development allowed under the proposed PMPU is consistent with the applicable GHG reduction measures in the District's CAP.

Table 4.6-13. Project Consistency with Relevant District CAP Measures

No.	District CAP Measure Description	Project Consistency Analysis
Transportation and Land Use		
TA1	Support and promote the use of alternate fuel, electric, or hybrid District-owned vehicles and vessels (also includes cargo handling equipment, terminal and stationary equipment).	Consistent Before Mitigation. The District has electrified various pieces of equipment at each of its marine terminals. Both the MCAS and CERP will further electrification and emission reduction efforts. Moreover, various proposed PMPU policies support renewable and zero-emission goals, such as SR Policy 3.1.2, which obligates the District to encourage, support, and plan to deploy net zero carbon emission projects and technologies on Tidelands. Additionally, MM-GHG-2 requires the District to purchase alternate fuel, electric, or hybrid passenger vehicles. MM-AQ-11 requires the District to install electric vehicle charging stations. MM-TRA-3 requires new development to implement TDM measures.
TA2	Support and promote non-District-owned vehicles and vessels to achieve the lowest emissions possible, using a mix of alternative fuel, electric, or hybrid technology.	Consistent Before Mitigation. See TA1. In addition, MM-AQ-6 requires the District to work with tenants to monitor and track alternate fuel or zero-emission harbor craft, dredgers, and other equipment. MM-AQ-7 requires the District to perform annual technological reviews to track roll-out and availability of zero-emission construction equipment.
TA3	Implement emissions reduction strategies at loading docks through electrification of docks or idling-reduction systems for use while at loading docks.	Consistent After Mitigation. MM-AQ-2 requires all construction vehicles, including delivery trucks, to limit idling times to 3 minutes, which is beyond that required by State law.
TA4	Electrification of marinas.	Consistent After Mitigation. MM-AQ-13 ensures that any marina or yacht club expansion will include infrastructure to ensure large yachts can utilize shore power while at berth.
TR1	Implement traffic and roadway management strategies to improve mobility and efficiency, and reduce associated emissions on general roadways within District Tidelands.	Consistent Before Mitigation. Mobility 1.1.11 requires the District to develop TDM guidelines and require development to comply with such guidelines. In addition, MM-TRA-1 requires the District to develop an impact fee program, consistent with ECON Policy 1.2.6, to fund transportation infrastructure improvements that would reduce VMT. MM-TRA-2 requires project proponents to make a fair share contribution to the District-implemented impact fee program to develop and expand VMT reducing infrastructure, including mobility hubs. MM-TRA-3

No.	District CAP Measure Description	Project Consistency Analysis
		requires future project proponents to implement a TDM Plan. These measures would improve mobility and efficiency by reducing vehicle trips and promoting alternative forms of transportation. In addition, EJ Policy 3.2.32 requires permittees, through CDPs issued by the District, to pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities.
TR3	Vehicle Idling: Enforce State idling laws for commercial vehicles, including delivery and construction vehicles.	Consistent Before Mitigation. See TA3.
TL1	Promote greater linkage between land uses and transit, as well as other modes of transportation.	Consistent Before Mitigation. See TR1.
TL2	Increase bicycling and walking opportunities (safe infrastructure to priority destinations) as an alternative to driving.	Consistent Before Mitigation. See TR1.
TT1	Encourage expansion of the transit network; both passenger transit and rail freight transportation.	Consistent Before Mitigation. See TR1.
TT2	Encourage increased transit performance (e.g., frequency and speed).	Consistent Before Mitigation. See TR1.
TT3	Encourage implementation of transit access improvements.	Consistent Before Mitigation. See TR1.
TV1	Implement trip reduction programs, such as: ride sharing, telecommuting and alternative work schedules; commute trip reduction marketing; and employer-sponsored vanpool/shuttle.	Consistent Before Mitigation. See TR1.
Energy Conservation and Efficiency		
EB1	Establish green building standards and/or policy for new construction.	Consistent After Mitigation. Ecology Policy 3.1.2 requires the District to encourage development to implement clean air action measures, such as efficiency building and energy efficient design. SR Policy 3.1.6 requires the District to promote the innovative use of “green” design for new or retrofitted Tidelands’ buildings, structures, and facilities. MM-AQ-9 requires future projects to incorporate energy efficiency design features striving to exceed the current year required Title 24 California Building Energy Efficiency Standards. Measures that may be implemented include: high-performance glazing;

No.	District CAP Measure Description	Project Consistency Analysis
		increased insulation; cool roof; high-efficiency heating, ventilating, and air condition systems and controls; programmable thermostats; variable frequency drives; and a high-efficiency lighting and control system. in addition, the project would be required to achieve Leadership in Energy and Environmental Design (LEED) Silver certification. MM-AQ-10 requires all new hotels prior to 2030 to reduce natural gas consumption (or achieve equivalent reductions elsewhere in design) and all development to be carbon neutral after 2030.
EB2	Establish green building standards and/or policy for existing buildings.	Consistent After Mitigation. See EB1.
EB3	Develop energy efficiency performance standards that achieve a greater reduction in energy use than otherwise required by State law.	Consistent After Mitigation. See EB1.
EB6	Replace light fixtures in non-Port facilities with lower energy bulbs such as fluorescent, LEDs, or CFLs.	Consistent After Mitigation. See EB1.
EH1	Implement the Adopt a Heat Island Reduction Plan that uses cool roofs, cool pavements, and strategically placed shade trees, and actively inspect and enforce State requirements for cool roofs on non-residential re-roofing projects.	Consistent After Mitigation. In MM-AQ-9 , future buildings project proponents will install a high-performance glazing with a low solar heat gain coefficient value that reduces the amount of solar heat allowed into the building and install sun shading devices in parking lots and asphalted common areas.
EH2	Urban Forestry Management: Develop an Urban Forestry Program to consolidate policies and ordinances regarding tree planting, maintenance, and removal.	Consistent After Mitigation. MM-AQ-9 requires each project proponent to incorporate various measures into project design, including tree planting and maintenance.
EH3	Evaluate existing landscaping and options to convert reflective and impervious surfaces to landscaping, and install or replace vegetation with drought-tolerant, low-maintenance native species that can also provide shade and reduce heat island effects.	Consistent After Mitigation. In accordance with MM-AQ-9 , future project proponents will install low-water plantings and drip irrigation to minimize water demand for landscaping.
EL1	Develop and implement performance standards for exterior lighting of commercial and industrial buildings and parking lots, which include minimum and maximum lighting levels while providing a safe environment.	Consistent After Mitigation. In accordance with MM-AQ-9 , future project proponents will use high-efficiency outdoor lighting and control systems. Additionally, all outdoor lighting will be equipped with light-emitting diode (LED) fixtures.

No.	District CAP Measure Description	Project Consistency Analysis
Water Conservation and Recycling		
WR1	Recycled Water Use: Establish programs and policies to increase the capture and use of recycled water.	Consistent After Mitigation. In accordance with MM-AQ-9 , future project proponents will maximize use of recycled water for irrigation in future project design.
WC1	Implement the Adopt a Water Conservation Strategy.	Consistent After Mitigation. MM-AQ-9 requires future project proponents to incorporate indoor water reduction measures, including high-efficiency toilets, high-efficiency urinals, low-flow faucets, and low-flow showers (as applicable) into design.
Alternative Energy Generation		
EA2	Implement an onsite renewable energy generation policy for 2035 (solar power, wind power, methane recovery, wave power, etc.).	Consistent Before Mitigation. SR Policy 3.1.3 requires future development to deploy renewable energy to improve energy reliability and economic resilience, where feasible. In addition, MM-AQ-9 requires future development to implement onsite renewable energy systems on new buildings given the appropriate structural and operational conditions, and MM-GHG-1 requires all new development to procure carbon free energy.
EA3	Implement an onsite renewable energy generation policy for by 2050 (solar power, wind power, methane recovery, wave power etc.).	Consistent After Mitigation. See EA2.
EA11	Implement a program to install technologies for generating energy from renewable sources such as solar power, wind power, and/or wave power on District Tidelands. Establish progressively more ambitious production goals for the years 2020, 2035, and 2050.	Consistent Before Mitigation. A solar-powered microgrid is currently under construction at TAMT. Solar photovoltaic panels will be installed on Warehouse C and will power the microgrid's battery storage. The microgrid will provide back-up power to Port-operated facilities, including security infrastructure, lights, offices, and the existing jet fuel storage system. Additionally, the District has installed four photovoltaic systems on District-owned facilities.
Waste Reduction and Recycling		
SW1	Increase the diversion of solid waste from landfill disposal.	Consistent After Mitigation. MM-AQ-9 specifies waste reduction as part of sustainable building.
SW2	Adopt a Construction and Demolition Recycling Ordinance.	Consistent After Mitigation. MM-AQ-9 requires future project proponents to divert construction and demolition debris from disposal in landfills and incineration facilities by 65%.
SW3	Develop a policy to reduce the generation of solid waste.	Consistent After Mitigation. MM-AQ-9 specifies compliance with AB 939 and the City of San Diego's Recycling Ordinance, which requires 50% of solid waste be recycled. In addition,

No.	District CAP Measure Description	Project Consistency Analysis
		compliance with the City of San Diego's Construction and Demolition Debris Deposit Ordinance would require 65% of all construction and demolition debris be recycled. This measure would also encourage use of recycled, regional, and rapidly renewable materials where appropriate during construction.
Miscellaneous		
MP1	Increase public awareness of climate change and climate protection challenges, and support community reductions of GHG emissions through coordinated, creative public education and outreach, and recognition of achievements.	Consistent Before Mitigation. The proposed PMPU includes various policies aimed at educating the public on environmental awareness. For example, ECO Policy 4.2.1 requires the District to continue environmental education programs to increase public understanding and appreciation of Tidelands' and the Bay's natural resources.
MP3	Ensure the District's GHG reduction efforts and Port Master Plan are aligned with, support, and enhance any regional plans that have been developed consistent with State guidance to achieve reductions in GHG emissions.	Consistent Before Mitigation. The proposed PMPU includes various policies aimed at engaging and coordinate with regional agencies. For example, Mobility Policy 2.2.4 requires the District to engage with railroad operators and agencies that have transportation authority to maintain, enhance, and expand the access between the cargo terminals and the regional freight infrastructure. SR Policy 3.1.1 requires the District to periodically update the District's CAP to ensure alignment with this Plan and with the District and State goals and targets for GHG emissions, shall start the CAP's update no later than within two years of the effectiveness of the certification of this Plan, and may periodically update the District's CAP thereafter.
MP4	Require District, and encourage District tenants, to purchase goods and services that embody or create fewer GHG emissions.	Consistent Before Mitigation. See TA1, TR1, and EA2.

Source: District 2013.

2017 Scoping Plan Update

The Scoping Plan, most recently updated in 2017, is the State's roadmap to achieving long-term GHG reduction targets. The 2017 Climate Change Scoping Plan integrates various CARB regulations and strategies, including Cap-and-Trade, LCFS, SB 350, Sustainable Freight Action Plan, Mobile Source Strategy, and the SLCP Strategy. The 2017 Climate Change Scoping Plan proposes meeting the 2030 goal by accelerating the focus on zero and near-zero technologies for moving freight, continued investment in renewables, greater use of low-carbon fuels including electricity and hydrogen, stronger efforts to reduce emissions of short-lived climate pollutants (CH₄, black carbon, and fluorinated gases), further efforts to create walkable communities with expanded mass transit and other alternatives to traveling by car, continuing the Cap-and-Trade program, and ensuring that natural lands become carbon sinks to provide additional emissions reductions and flexibility in meeting the target (CARB 2017a).

The Scoping Plan also recognizes the key role local governments and new development have in helping the State meet its 2030 GHG reduction target. Guidance has also been published by CARB (2019), OPR (2018), and other agencies that identify goals and sustainability features that are needed of new development in order for the State to achieve its 2030 reduction target and demonstrate progress in attaining its 2045 and 2050 goals established under EO B-55-18 and S-3-05, respectively.

As mentioned, while the Scoping Plan is the State’s roadmap to achieving long-term GHG reductions, CARB has developed various other plans, policies, regulations, and programs aimed at reducing GHG emissions. Table 4.6-14 summarizes the consistency of the proposed PMPU with selected Scoping Plan policies. Details regarding consistency with all statewide plans on an emissions sector-by-sector basis follows the table.

Table 4.6-14. PMPU Consistency with Selected 2017 Scoping Plan Policies

Policy	Scoping Plan Primary Objective	Consistency Analysis
SB 350 (superseded by SB 100)	Reduce GHG emissions in the electricity sector through the implementation of the 50% RPS, doubling of energy savings, and other actions as appropriate to achieve GHG emissions reductions planning targets in the Integrated Resource Plan process.	This is a State program that requires no action at the local or project level. Benefits to project-related electricity, shore power, and water consumption will be realized. The project will be subject to any regulations or actions developed to implement the goals of SB 350. Proposed PMPU mitigation will require various strategies to reduce energy demands, including exceeding current building standards, water and lighting efficiency, installation of renewable energy, water conservation, and increased use of shore power. Mitigation promotes the development of all-electric buildings and requires applicants to implement zero net energy construction if such regulations are adopted.
Low Carbon Fuel Standard	Transition to cleaner/less-polluting fuels that have a lower carbon footprint.	This is a State program that requires no action at the local or project level. Nonetheless, development of new land uses under the proposed PMPU would support reducing the carbon footprint associated with vehicle travel. PMPU policies would promote a pedestrian-friendly and walkable waterfront. PMPU policies and PEIR mitigation would require development projects to implement measures to reduce VMT, including providing bicycle parking, dedicated EV parking and charging, and telecommuting. Moreover, the MCAS supports the transition to cleaner/less-polluting fuels through ambitious goals for trucks, equipment, and all sectors of freight movement.
Mobile Source Strategy (Cleaner Technology and Fuels [CTF] Scenario)	Reduce GHGs and other pollutants from the transportation sector through transition to zero-emission and low-emission	This is a State program that requires no action at the local or project level. Benefits to District-wide vehicle travel and goods movement will be realized independently. Nonetheless, new land uses will be situated near

Policy	Scoping Plan Primary Objective	Consistency Analysis
	vehicles, cleaner transit systems and reduction of VMT.	existing transit and expand bikeways, and will reduce VMT, and mitigation will promote EV charging. Moreover, the MCAS supports the Mobile Source Strategy through the implementation of ambitious goals for mobile sources that reduce emissions to support attainment of State and Federal ozone standards, while improving community health and supporting statewide and local GHG reduction efforts.
SB 1383	Approve and implement Short-Lived Climate Pollutant strategy to reduce highly potent GHGs.	This is a State program that requires no action at the local or project level. Mitigation requires future project applicants to implement programs to promote waste reduction, recycling, or composting, and for commercial, retail, and restaurant uses to abide by organic waste collection, hauling, and composting standards.
California Sustainable Freight Action Plan	Improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system.	This is a State program that requires no action at the local or project level. This program aims to improve freight efficiency by 25%, deploy more than 100,000 zero-emission freight vehicles, and increase competitiveness of California's freight system. This program is only applicable to freight terminals (TAMT and National City Marine Terminal). The PMPU does not propose any changes to cargo throughput. Regardless, the MCAS supports the California Sustainable Freight Action Plan through the transition to zero-emission truck, harbor craft, and equipment technologies, while ensuring the freight terminals remain competitive.
Post-2020 Cap-and-Trade Program	Reduce GHGs across the largest GHG emissions sources.	This a State program that requires no action at the local or project level. This program is only applicable to the one source at the Port that is regulated under the Cap-and-Trade program. Emission reductions from that source are regulated by CARB and are outside of the control of the District until the next lease agreement.

Appendix B of the Scoping Plan includes a list of local actions that local agencies can implement to support the Scoping Plan and other climate goals. These are organized into municipal changes (such as municipal and zoning codes) and CEQA mitigation measures. While CARB acknowledges that the local action list is neither exhaustive nor required, the list of local actions can be viewed as a general reference document. The list of actions mostly includes measures that are similar to those applied herein. For example, the general intent is to reduce resource consumption from major sources of emissions by improving energy efficiency, reducing VMT, promoting zero-emission vehicles, and

promoting renewable energy. There are mitigation measures in both Section 4.2 and in this section, as well as various proposed PMPU policies, that address each of these sources.

As noted above, the proposed PMPU is considered consistent with the provisions of the identified plans if it meets the general intent of the applicable plans. A given project need not be in perfect conformity with every policy nor does State law require precise conformity of a proposed project with every policy or land use designation. Similarly, consistency with the Scoping Plan is based on the general intent of the plan (statewide emission reductions to achieve 40 percent below 1990 levels by 2030) and the measures to meet that goal (e.g., SB 350, Mobile Source Strategy), and not each local action called out in Appendix B of the Scoping Plan.

Passenger Vehicles

GHG emissions associated with on-road mobile sources would be generated from worker and visitor motor vehicles as well as delivery vehicles associated with the additional hotel rooms, increased restaurant and retail land uses, increased meeting and convention center space, additional slips for recreational boating and commercial fishing. As shown in Table 4.6-4, passenger vehicles were the largest emission source District-wide in 2016. As shown in Table 11, in 2030 and 2050, emissions from mobile sources represent the third largest source of GHG emissions among the proposed new uses in 2030 and second largest source of GHG emissions among the proposed new uses in 2050.

Federal, State, and local regulatory efforts target three elements of emissions reduction from mobile sources: vehicle fuel efficiency, the carbon content of fuels, and VMT. Most adopted programs and regulations focus on fuel efficiency (e.g., CAFÉ standards, Pavley standard) and reducing the carbon intensity of transportation fuels (e.g., LCFS). Vehicle electrification is also rapidly becoming part of the State's approach to reducing mobile source emissions (e.g., Title 24). California adopted SB 375 to integrate transportation planning, regional housing allocation, and GHG reduction through reductions in VMT. The GHG reduction targets adopted by CARB and incorporated by Metropolitan Planning Organizations in their RTP/SCS are expected to achieve much of the required VMT reduction needed for the State to meet their long-term GHG reduction targets. However, a recent CARB assessment makes clear that the State "is not on track to meet greenhouse gas reductions expected under SB 375" (CARB 2018). Accordingly, additional GHG reduction, specifically through further reductions in VMT, is needed to meet the State's climate change objectives (CARB 2020).

SB 743 is intended to close the VMT and emissions reduction gap. There is a nexus between SB 743 and the State's goals to reduce mobile source GHG emissions; one of the criteria under SB 743 for determining the significance of the transportation impacts of a project is a reduction in GHG emissions. In response to SB 743, OPR released its revised *Technical Advisory on Evaluating Transportation Impacts in CEQA* in December 2018. The advisory indicates that "achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals" (OPR 2018). This OPR reduction goal is consistent with recent CARB (2020b) analysis, which demonstrates that a 14.3 percent reduction of VMT per capita by 2050 (compared to a 2015–2018 average) would be needed statewide to meet their GHG planning goals through 2050.

The proposed PMPU does not include any features that would conflict with these programs. In fact, the PMPU includes various policies to reduce the dependence on passenger vehicles by promoting

alternative forms of transit. M Goal 1 provides for an integrated, accessible, inclusive, and diverse network that facilitates the movement of people. Various policies support this goal. For instance:

- Mobility Policy 1.2.1 requires the District to plan, design, and implement a network of mobility hubs (Regional, Local Gateway, and Connector) that provides the opportunity for users to change from one mode of travel to another.
- Mobility Policy 1.1.10 requires the District to provide areas for transit stops and transit lanes for expanded transit opportunities on Tidelands and explore a means for financing expanded transit opportunities with agencies that have transportation authority.
- Mobility Policy 1.1.11 requires the District to develop TDM guidelines and require development to comply with such guidelines, with the intent to reduce dependence on single-occupancy vehicles and reduce VMT to, from, and within Tidelands.

Proposed PMPU mitigation would ensure compliance with the CARB-related strategies to reduce emission from passenger vehicles. **MM-TRA-2** requires project proponents to make a fair share contribution to the District-implemented impact fee program to develop and expand VMT reducing infrastructure, including mobility hubs, and **MM-TRA-3** requires future project proponents to implement a TDM Plan. Moreover, **MM-GHG-2** requires the District to purchase alternative fuel, electric, or hybrid District vehicles. These mitigation measures would act to reduce VMT. However, while PMPU policies coupled with mitigation measures would reduce VMT and passenger vehicle emissions, impacts related to transportation (passenger vehicle) emissions are considered significant because it is uncertain if measures would reduce transportation emissions in line with CARB concepts (**Impact-GHG-2**), and the proposed PMPU would not be consistent with Scoping Plan mobile source policies. Please see the VMT discussion in Section 4.14.

Boating and Fishing

GHG emissions associated with boating and fishing would be generated from recreational and fishing boats visiting waterside features. As shown in Tables 4.6-11 and 4.6-12, emissions from these boating activities in both 2030 and full buildout 2050 represent a small share (1–6 percent) of PMPU emissions.

Recreational boating includes personal watercraft (jet skis), sailboats, jet boats, and yachts. Smaller watercraft are typically gasoline powered, and larger yachts are typically diesel powered. Commercial fishing includes vessels that carry staff to fishing areas outside of the Bay. CARB has proposed and adopted regulations for certain marine vessels, and regulations have been proposed for other spark-ignition engines used in boats for propulsion to reduce ozone precursor emissions. Spark-ignition auxiliary marine engines (power generators, winches, or auxiliary propulsion engines for sail boats) are defined as small off-road spark-ignition engines (below 25 horsepower [hp]) or large off-road spark-ignition engines (25 hp and greater) depending on their size. Compression-ignition auxiliary and propulsion marine engines under 50 hp are defined as off-road diesel (compression-ignition) engines. Large yachts generally include engines that are regulated under CARB's harbor craft rules (District 2018b).⁸

⁸ Harbor craft include a variety of vessel and boat types that serve many functions within and near San Diego Bay, including crew and supply boats, charter fishing vessels, commercial fishing vessels, ferry and excursion vessels, pilot vessels, towboats or push boats, tug boats, and work boats

The 2017 Climate Change Scoping Plan does not specifically plan for or identify emissions reductions from smaller watercraft that are used for personal recreational boating, or commercial and sport fishing uses. However, the modeling to support the 2017 Scoping Plan Update does include an assumption that a certain percentage of diesel harbor craft will convert to electricity. Starting in 2020, that modeling assumes 6 percent of harbor craft energy demand will be fully electric by 2050 and 71 percent will be diesel hybrid by 2050, and proposes requiring all harbor craft vessels to use renewable diesel starting in 2023. While not directly applicable to recreational boating and boating related to commercial and sport fishing, these technologies may make their way into the recreational boating market, particularly for large diesel yachts. Additionally, the 2020 Mobile Source Strategy includes concepts to adopt new emission standards for smog forming pollutants as well as to incorporate electrification of small outboard and personal watercraft engines, and CARB has initiated rulemaking to adopt emission standards for recreational boats. The District has no authority to regulate which personal watercraft use its slips and boat ramps, but the District can require tenants to install electrical infrastructure to support CARB efforts to electrify a portion of the personal watercraft fleet.

The proposed PMPU does not include any policies specifically aimed at reducing emissions from boating and fishing-related activities. However, **MM-AQ-12** requires the District to ensure that all future projects that propose to install new slips, install and maintain shore power capabilities where suitable upgrades are feasible to ensure that larger watercraft (such as large yachts) can plug into shore-side power while docked in the marina (instead of running auxiliary engines to maintain the ship's power needs). This measure is consistent with District CAP measure TA4, which promotes electrification of marinas.

CARB has initiated rulemaking to amend the harbor craft rule. However, to date, because of the unique offshore operations and economic considerations, requirements for the commercial fishing fleet include upgrading fleet to Tier 2 or newer engines between 2030 and 2032. No additional requirements to electrify certain routes or pieces are being proposed. The District will track regulations through MCAS implementation and will be consistent with this regulation. Based on the above, the District is consistent with CARB's intent regarding recreational boating and commercial fishing based on implementation of **MM-AQ-12** and by tracking regulations through the MCAS. Thus, after mitigation, boating-related emissions would not conflict with the State's long-term emission reduction trajectory.

Energy Sources

GHGs are emitted directly from typical development through the combustion of fuel (e.g., natural gas for space and water heating) and indirectly from the generation of electricity. As shown in Table 4.6-11 and Table 4.6-12, in 2030 and 2050, emissions from energy consumption represent the largest source of PMPU emissions under unmitigated conditions and second to third largest under mitigated conditions.

The 2017 Climate Change Scoping Plan outlines strategies to reduce energy demand and fossil fuel use, while increasing energy efficiency and renewable energy generation. These strategies include transitioning to cleaner fuels, increasing efficiency in existing buildings, and electrifying end uses. Several of these strategies are reflected in State laws and regulatory programs. For example, SB 100 requires a doubling of energy efficiency by 2030 and 60 percent renewable energy supply by 2030. SB 100 also sets a target of 100 percent carbon-free electricity by 2045. The 2019 Title 24 standards mandate higher efficiency levels and rooftop solar photovoltaic systems for all new residential

buildings constructed in 2020 and beyond. Future standards are expected to result in zero net energy for newly constructed commercial buildings. The CEC also enforces the Appliance Efficiency Regulations contained in Title 20 of the California Code of Regulations. The regulations establish water and energy efficiency standards for both Federally regulated and non-Federally regulated appliances.

The District's Green Port Policy (BPC Policy No. 736) includes various policy objectives, some of which cover energy uses. For example, one policy objective requires the District to strive to strengthen the District's financial position by maximizing the long-term benefits of energy and resource conservation. The District has implemented various projects to reduce energy consumption, including retrofitting existing lighting to more efficient LED technology, providing educational programs for employees, conducting energy audits on Port facilities to identify future initiatives, and installing solar photovoltaic systems at four facilities owned by the District. In addition, the District is working on installation of a solar-powered microgrid at TAMT, and the District's CAP includes numerous goals for efficient consumption of energy (e.g., energy retrofits, efficient lighting) and renewable energy production.

The above energy efficiency and renewable energy policies are consistent with the 2017 Scoping Plan's overall goal of reducing building energy emissions to meet the State's 2030 GHG reduction target. The proposed PMPU does not include any features that would conflict with these programs. Ecology Policy 3.1.2 requires the District to encourage development to implement clean air measures, including but not limited to efficient buildings design features and energy efficient lighting.

While new development would be required to comply with the Title 24 Standards applicable at the time of construction, the proposed PMPU does not explicitly require new development to use high-efficiency or Energy Star appliances, which are recognized by OPR (2018) as critical design features for new development. Accordingly, the proposed PMPU may conflict with the 2017 Scoping Plan and attainment of the State's 2030 reduction target prior to mitigation. **MM-AQ-9** would require all future development projects to use Energy Star appliances. The 2017 Scoping Plan calls for doubling of energy savings. Moreover, in order to meet the State's expressed interest in pursuing carbon neutrality (EO B-55-18), OPR (2018) recommends that all new buildings be all electric. Because SB 100 obligates utilities to supply 100 percent carbon-free electricity by 2045, all-electric buildings that do not include any onsite fuel combustion (such as natural gas) would not generate any emissions. **MM-GHG-1** requires all future tenants to ensure that all new electricity obtained is provided by renewable sources.

After mitigation, energy-related emissions would not conflict with the State's long-term emission reduction trajectory.

Solid Waste

Solid waste emissions result from CH₄ associated with the decomposition of the waste and CO₂ emissions associated with the combustion or flaring of CH₄. Solid waste may be disposed of in landfills or diverted for recycling, composting, reuse, or other means to avoid landfilling. As shown in Table 4.6-11, emissions from solid waste represent a small share (6–9 percent) of unmitigated PMPU emissions.

The 2017 Scoping Plan aims to reduce waste emissions by diverting waste away from landfills through waste reduction, re-use, composting, and material recovery. It does not set quantitative

targets for reducing waste emissions but does aim to reduce the amount of waste that enters landfills, with a goal of reducing solid waste-related GHG emissions due to organic diversion (i.e., composting) by 14 percent. AB 341 requires mandatory recycling for certain commercial businesses. AB 341 also established a statewide recycling goal of 75 percent by the year 2020. Implementation measures include source reduction, recycling, or composting. Forthcoming regulations pursuant to SB 1383 will establish minimum standards for organic waste collection, hauling, and composting. The final regulations will take effect on or after January 1, 2022.

The proposed PMPU does not include any features that would conflict with these programs. **MM-AQ-9** includes measures related to solid waste, consistent with the CAP, including staying in line with recycling ordinances; ensuring all commercial, restaurant, and retail uses implement recycling, composting of food waste and other organics, and the use of reusable products; and promoting the uses of recycled, regional, and rapidly renewable materials where appropriate. The emphasis on composting and provision of composting services is consistent with the 2017 Scoping Plan, and would support AB 341 and SB 1383's overall goals of reducing landfilled waste.

Water and Wastewater

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of water. Additional wastewater emissions include CH₄ and N₂O, although these are generated by wastewater treatment at individual wastewater treatment plants. The proposed PMPU does not include any new wastewater treatment plants. As shown in Table 4.6-11, emissions from water and wastewater represent a small share (less than 2 percent) of PMPU emissions under unmitigated conditions.

The 2017 Scoping Plan outlines objectives and goals to reduce GHGs in the water sector, including using and reusing water more efficiently through greater water conservation, drought-tolerant landscaping, stormwater capture, and water recycling. Regulations have further targeted water supply and water conservation through building and landscaping efficiency (e.g., Title 24). The Water Conservation Act of 2009 sets an overall goal of reducing per-capita urban water use by 20 percent by December 31, 2020.

MM-AQ-9 includes indoor and outdoor water efficiency measures, including a 20 percent target reduction for indoor water use and installation of low-water plantings and drip irrigation for District uses. These measures are consistent with the 2017 Scoping Plan's water measures and the State's regulatory programs within the water sector.

Area Sources

Area sources emitting GHGs typically include hearth usage (including wood-burning fireplaces) and landscaping equipment. As the proposed PMPU does not propose any residential development, GHG emissions from area sources would be limited to use of landscaping equipment. As shown in Table 4.6-11, emissions from area sources represent the smallest share (no greater than 1 percent) of PMPU emissions.

CARB has not developed any relevant measures in the Scoping Plan or other regulations related to area source emissions. CARB adopted emissions standards for small off-road engines (i.e., landscape equipment) in 1990. More recently, CARB stated in their 2020 Mobile Source Strategy their intent to consider new standards for small engines in 2020, including regulatory and incentive approaches

and a major shift to zero-emission equipment (CARB n.d.). However, to date, adopted CARB emission standards are aimed at reducing smog-forming pollutants. No standards have been adopted that are aimed at reducing GHG emissions from small off-road engines. There are also no specific provisions for exterior electric outlets, which would support the 2017 Climate Change Scoping Plan's goal for decarbonizing off-road equipment. Accordingly, the proposed PMPU may conflict with the 2017 Climate Change Scoping Plan and attainment of the State's 2030 reduction target prior to mitigation.

Achieving the State's long-term climate change goals under S-3-05, B-55-18, and SB 100 will inevitably require the transition away from fossil-fuel power energy sources, including but not limited to landscaping equipment. Recognizing this, OPR (2018) guidance recommends that land use development projects strive to avoid fossil fuels. **MM-AQ-9** requires developments with landscaping to install electric outlets in the exterior to facilitate that use of electric landscaping equipment.

High GWP Emissions (HFCs)

HFCs are synthetic gases that may be used in residential refrigeration and air conditioning units, as well as in motor vehicle air conditioning units. Emissions of HFCs occur as a result of wear, faulty maintenance, and leakage at the end of a product's lifetime.

The 2017 Scoping Plan assumes implementation of the SLCP Reduction Strategy and attainment of the State's SLCP reduction targets for HFCs. The SLCP Reduction Strategy identifies four State strategies that will develop grants and incentives for alternatives to HFCs, as well as evaluate the feasibility of a new ban on HFCs in new non-residential refrigeration units, air conditioning (non-residential and residential) units, and residential refrigerators and freezers. Regulations stemming from these strategies have not yet been developed. Both existing and new development, including commercial, retail, and restaurant development associated with the proposed PMPU, would be required to comply with State regulations for minimizing HFCs that are in place at the time of construction.

Other State Programs

As discussed above, systemic changes will be required at the State level to achieve the statewide future GHG reduction goals. Regulations—such as the SB 100-mandated 100 percent carbon-free RPS by 2045; implementation of the State's SLCP Reduction Strategy, including forthcoming regulations for composting and organics diversion; and future updates to the State's Title 24 standards (including requirements for net zero energy buildings)—will be necessary to attain the magnitude of reductions required for the State's goals. The District will be required to comply with these regulations in new construction (in the case of updated Title 24 standards), or would be directly affected by the outcomes (e.g., energy consumption would be less carbon intensive due to the increasingly stringent RPS). Unlike CARB's Scoping Plans, which explicitly call for additional emissions reductions from local governments and new projects, none of these State regulations identify specific requirements or commitments for new development beyond what is already required by existing regulations, or will be required in forthcoming regulation. Thus, for the foreseeable future, the District would not conflict with any other State-level regulations pertaining to GHGs in the post-2020 era, and this impact would be less than significant.

Conclusion for Consistency with State Plans, Programs, and Policies

Overall, the proposed PMPU is generally consistent with goals and strategies employed by CARB through the Scoping Plan, the Sustainable Freight Action Plan, and the Mobile Source Strategy. The

District is consistent with the accelerating focus on zero and near-zero technologies for moving freight, continued investment in renewables, greater use of low-carbon fuels including electricity, and further efforts to improve mobility and reduce VMT. Overall, the proposed PMPU would be partially consistent with the Scoping Plan and related strategies.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to conflicts with the District's CAP, which is a plan adopted to reduce GHG emissions (**Impact-GHG-2**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 1 would include the same water and land uses for PD3 analyzed above. Operations that would occur for Option 1 would fall within the range of scenarios analyzed above. Option 1 would not include new uses that generate substantial emissions, and would not change construction or operational assumptions. GHG emissions associated with reconfiguring and closing of North Harbor Drive, construction of a Waterfront Destination Park, and other improvements to open space would be similar to the analysis above. Option 1 could result in operational emissions that are similar to those identified above, and therefore could result in the generation of GHG emissions that, before mitigation, would be inconsistent with the District's CAP, which was adopted to reduce GHG emissions (**Impact-GHG-2**). However, this would not be additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to conflicts with the District's CAP, which is a plan adopted to reduce GHG emissions (**Impact-GHG-2**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would include the same water and land uses for PD3 analyzed above. Operations that would occur for Option 2 would fall within the range of scenarios analyzed above. Option 2 would not include new uses that generate substantial emissions, and would not change construction or operational assumptions. GHG emissions associated with operation of additional Recreation Open Space and the expansion of the Lane Field Setback Park would be similar to the analysis above. Option 2 could result in operational emissions that are similar to those identified above, and therefore could result in the generation of GHG emissions that, before mitigation, would be inconsistent with plans, policies, and regulations adopted to reduce GHG emissions

(Impact-GHG-2). However, this would not be additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to conflicts with the District's CAP, which is a plan adopted to reduce GHG emissions (**Impact-GHG-2**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would include the same water and land uses for PD3 analyzed above. Operations that would occur for Option 3 would fall within the range of scenarios analyzed above. Option 3 would not include new uses that generate substantial emissions, and would not change construction or operational assumptions. GHG emissions associated with realignment of North Harbor Drive and the additional Recreational Open Space would be similar to the analysis above. Option 3 could result in operational emissions that are similar to those identified above, and therefore could result in the generation of GHG emissions that, before mitigation, would be inconsistent with the District's CAP, which was adopted to reduce GHG emissions (**Impact-GHG-2**). However, this would not be additional or more severe impact than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to consistency with plans, policies, and regulatory programs adopted for the purposes of reducing the emissions of GHGs for 2030 and post-2030. Rather, the proposed PMPU policies listed in Section 4.6.4.3 would reduce potential impacts related to consistency with GHG reduction programs by:

- Committing the District to coordinating with agencies that have transportation authority to explore opportunities to expand accessible transit service to Tidelands (Mobility Policy 1.1.9).
- Developing TDM guidelines, and requiring development to comply with such guidelines, with the intent to reduce dependence on single-occupancy vehicles and reduce VMT to, from, and within Tidelands (Mobility c1.1.11).
- Engaging with stakeholders—such as railway companies, trucking companies, cargo and freight shipping lines, and service providers—to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives (Mobility Policy 2.2.3).
- Maintaining and developing improvements to linkages between the marine terminals and landside networks—including but not limited to, roadways, rail, and pipelines—to enable efficient movements of goods along those networks and to support the working waterfront (Mobility Policy 2.2.5).
- In coordination with operators and stakeholders, planning for improvements to railroad corridors—including, but not limited to, spurs, rail storage facilities, switching facilities, and suitable rail trackage within the working waterfront, both on dock and near dock—to better interface the movement of cargo between ship and land carriers (Mobility Policy 2.2.7).

- Encouraging development to implement clean air action measures such as efficient building design features; alternative-powered vehicles, vessels, and advanced technologies; parking management programs; alternative transportation programs; energy efficient lighting; and native tree planting and landscaping (Ecology Policy 3.1.2).

Impact Determination and Mitigation

Implementation of the proposed PMPU would result in inconsistency with plans, policies, and regulations adopted to reduce GHG emissions, including the District's CAP, CARB 2017 Scoping Plan, and the CARB Mobile Source Strategy.

Significant Impacts

Impact-GHG-2: Conflict with Plans, Policies, and Regulations Adopted to Reduce GHG Emissions. Project emissions, before mitigation, would be inconsistent with plans, policies, and regulations adopted to reduce GHG emissions.

Mitigation Measures

For **Impact-GHG-2**:

Implement **MM-AQ-2** and **MM-AQ-3**, and **MM-AQ-6** through **MM-AQ-12**, as described in Section 4.2.

Implement **MM-TRA-1** through **MM-TRA-3**, as described in Section 4.14.

Implement **MM-GHG-1** and **MM-GHG-2**, as described in Threshold 1 above.

Level of Significance After Mitigation

Impact-GHG-2 would be reduced to less than significant after implementation of **MM-AQ-2** and **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-12**, **MM-TRA-1** and **MM-TRA-3**, **MM-GHG-1**, and **MM-GHG-2** because they would ensure that the proposed PMPU would be consistent with the relevant plans, policies, and regulatory programs, including the Scoping Plan and Sustainable Freight Action Plan, by ensuring the District and PMPU are implementing all relevant measures in the stated plans. Therefore, these impacts would be less than significant.

Threshold 3: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis

Construction

Construction activities for future development associated with the proposed PMPU would require use of heavy off-road equipment such as dump trucks, cranes, excavators, tractors, and graders. Construction would require electricity for use in mobile offices and water delivered to construction sites, gasoline and diesel fuel for transportation of construction workers and haul trucks to and from future development sites, and diesel fuel for operation of off-road equipment as well as marine

vessels for in-water construction activities. Energy consumption would vary substantially depending on the level of activity, length of construction period, specific construction activities, types of equipment, and number of personnel. The majority of energy use during construction would be attributed to use of diesel-powered construction equipment, followed by the use of diesel-powered trucks for material hauling and vendor trips. Construction contractors would be required to comply with the provisions of 13 California Code of Regulations Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than 5 minutes, which would minimize unnecessary fuel consumption. While the timing, intensity, and details of future project construction are not known at this time, modeling was performed to approximate the energy impacts that could arise from future construction activities. Table 4.6-15 summarizes the construction energy use by source associated with implementation of the proposed PMPU and all related uses.

Buildout under the proposed PMPU would also use building materials that would require energy use during the manufacturing and/or procurement of that material; however, as noted in the California Natural Resources Agency's Final Statement of Reasons, "a full 'lifecycle' analysis that would account for energy used in building materials and consumer products will generally not be required" (California Natural Resources Agency 2018). It is reasonable to assume that manufacturers of building materials such as concrete, steel, lumber, or other building materials would employ energy conservation practices in the interest of minimizing the cost of doing business. It also is reasonable to assume that non-custom building materials, such as drywall and standard-shaped structural elements, would have been manufactured regardless of the proposed PMPU and, if not used for future development under the proposed PMPU, would be used in a different project. Therefore, the consumption of energy required for the manufacturing of building and construction material is not part of the quantitative analysis.

Table 4.6-15. Estimated Construction Energy Consumption by Source

Source	Energy Consumption (million BTUs/total)
Diesel	
Trucks	424,376
Equipment	75,492
<i>Total Diesel</i>	499,869
Gasoline	
Workers	314,273
<i>Total Gasoline</i>	314,273
Total	814,142

Source: Appendix C.

It is anticipated that, for any given future development, total energy consumed during the construction period would represent a small demand on local and regional fuel supplies. However, depending on the size and scale of an individual project, along with its construction schedule and other parameters, there may also be instances where the construction-related energy use generated by a single project could be substantial. While many future developments may not require a significant amount of energy during construction relative to regional demand, it is possible that such projects could still result in the wasteful, inefficient, or unnecessary consumption of energy

resources during project construction if measures are not taken to ensure energy is used efficiently. Therefore, potential impacts for wasteful, inefficient, or unnecessary construction of future development associated with the proposed PMPU would be significant (**Impact-EN-1**).

To reduce the potential for future development under the proposed PMPU to result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction, **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, and **MM-GHG-2** would be implemented. **MM-AQ-2** requires the implementation of diesel emission-reduction measures including limits to all equipment and delivery truck idling times during construction and maintenance and proper tuning of all construction equipment. **MM-AQ-3** and **MM-AQ-6** require the use of modern and clean off-road equipment and harbor crafts or dredgers, respectively, during future construction projects, and require these projects to use renewable diesel-fuel. Moreover, **MM-GHG-2** requires that the District replace all fossil-fueled on-road vehicles in its fleet with zero-emission vehicles by 2030, consistent with the District's CAP. The above measures would avoid or reduce the wasteful, inefficient, and unnecessary consumption of energy resources during construction of future projects under the proposed PMPU. Therefore, implementation of these measures would reduce energy impacts associated with construction of future development under the proposed PMPU to less than significant.

Operation

Operation of future development allowed under the proposed PMPU would require energy associated with tenant facilities (e.g., hotels, marinas, boatyards), maritime activity (e.g., the movement of goods and people associated with marine terminal operations), and District operations (e.g., District-owned building and outdoor energy consumption and fleet activity). Operation of future development on the landside portion of the proposed PMPU area that would involve the use of energy resources include employee and visitor vehicle trips (e.g., diesel and gasoline for visitor travel to and from future project sites), and utility-related consumption (e.g., electricity and natural gas in buildings, water consumption, wastewater and solid waste generation). Waterside energy consumption during operation of future development would be related to the use of recreational boats and marine terminal operations, which would primarily include electricity for maritime shore power and diesel and gasoline for boating. Once operational, these future development projects would result in greater energy consumption compared to existing conditions. Similar to what was described under *Construction* above, because the details of future projects are not known at this time, the specific effects on energy from operation of individual future projects cannot be accurately quantified. However, the overall operational energy consumption from buildout of the proposed PMPU is presented in Table 4.6-16. As shown in Table 4.6-16, operation of new development is estimated to consume approximately 330,000 million BTUs of energy by 2030 and 790,000 million BTUs of energy by 2050, under unmitigated conditions.

Energy consumption is deemed wasteful, inefficient, or unnecessary if it increases per capita consumption, increases reliance on fossil fuels, and decreases reliance on renewable energy sources. The proposed PMPU includes policies that increase energy efficiency, promote or require the reduction of fossil fuel consumption (i.e., by replacing diesel equipment with electric equipment), and increase reliance on renewable energy sources (occurring per State law, and occurring sooner per MM-GHG-2). However, future development allowed under the PMPU will result in an increase in energy consumption relative to existing conditions, and would increase with increased development through 2050. Because per capita energy consumption cannot be quantified in this situation, the

increase in energy consumption during operations may result in a potentially significant impact due to wasteful, inefficient, and unnecessary consumption of energy resources during operations. **(Impact-EN-1)**.

Table 4.6-16. Estimated Energy Consumption During Operations Prior to Mitigation (million BTUs/year)

Source	Unmitigated		Mitigated	
	2030	2050	2030	2050
Natural Gas	163,574	398,768	38,336	38,336
Electricity	124,216	302,818	114,203	278,408
Gasoline	38,861	81,899	32,272	68,639
Diesel	1,877	3,908	1,558	3,275
Total	328,528	787,393	186,369	388,658
Change from Unmitigated	-	-	-43%	-51%

Source: Appendix C.

Notes:

Energy is provided in million BTUs for comparison purposes.

Totals may not sum due to rounding.

BTUs can be converted to gallons of gasoline and diesel using the following constants: 113,927 BTU/1 gallon of gasoline; 129,488 BTU/1 gallon of diesel. BTUs can be converted to kWh/year using the 3,416 BTUs per kWh constant.

To reduce the potential for future development under the proposed PMPU to result in wasteful, inefficient, or unnecessary consumption of energy resources associated with new development, **MM-AQ-2, MM-AQ-3, MM-AQ-6, and MM-AQ-9** through **MM-AQ-12** as well as **MM-GHG-1** and **MM-GHG-2** would be implemented.

MM-AQ-2, MM-AQ-3, MM-AQ-6, and MM-AQ-9 through **MM-AQ-12** as well as **MM-GHG-1** and **MM-GHG-2** include various mitigation strategies to increase energy efficiency, reduce fossil fuel energy consumption, promote renewable energy sources, and ensure future development projects are constructed in line with sustainability and resource conservation goals established by the State and by the District. These measures will promote energy conservation and reduce energy consumption from all relevant sources. For example, **MM-GHG-1** will ensure electricity from all tenants is completely provided by renewable sources by 2030, which will ensure that electricity-related emissions trend down over time. **MM-GHG-2** will require the replacement of the District's existing vehicles with alternative fuel, electric, or hybrid vehicles.

Additionally, implementation of **MM-AQ-11** and **MM-AQ-12** would also reduce fuel consumption by requiring the District to develop and implement an EV charging program and requiring marina operators to install dockside electrical infrastructure for boats to plug into when docked, respectively. Marina operators would provide charging infrastructure at marinas and promote public awareness. Other measures, including **MM-AQ-9** and **MM-AQ-10**, would require new developments to implement sustainability measures in building design that would result in the reduction of energy and water consumption and waste generation. Specially, **MM-AQ-10** would reduce natural gas energy consumption 73 percent.

Implementation of **MM-AQ-9** through **MM-AQ-12**, and **MM-GHG-1** and **MM-GHG-2** would reduce the energy demand and fossil fuel use of future development to ensure the proposed PMPU does not

result in potential wasteful, inefficient, or unnecessary consumption of energy resources. With mitigation, future development under the proposed PMPU would assist with energy conservation goals because it would promote energy efficiency and sustainability measures to reduce energy consumption, and promote installation of renewable energy. With this mitigation, the proposed PMPU's energy consumption would be reduced to 43 percent in 2030 and 51 percent in 2050 relative to unmitigated conditions. Thus, the mitigated operational energy demand would not cause a wasteful, inefficient, or unnecessary consumption of energy sources by implementing energy efficiency and sustainability measures that would reduce total energy consumption compared to the unmitigated buildout projections, and impacts would be less than significant.

Transportation-Related Energy Demand

Construction

As discussed above, the construction of future development under the proposed PMPU would involve transportation-related energy demand (i.e., diesel and gasoline fuel). During construction activities, contractors would be required to comply with the provisions of 13 California Code of Regulations Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes, which would minimize unnecessary fuel consumption. It is anticipated that, for any given future development, transportation-related energy consumed during the construction period would represent a small demand on local and regional fuel supplies. However, it is possible that the proposed project could still result in the wasteful, inefficient, or unnecessary consumption of transportation-related energy if measures are not taken to ensure energy is used efficiently. Thus, while not quantifiable, future development under the proposed PMPU would implement mitigation measures **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, and **MM-GHG-2** to reduce transportation related energy demand. The implementation of these measures would implement feasible strategies to help avoid or reduce the wasteful, inefficient, and unnecessary consumption of transportation-related energy resources during construction of future projects under the proposed PMPU. Therefore, implementation of the recommended measures would reduce transportation-related energy impacts associated with construction of future development under the proposed PMPU to less than significant (**Impact-EN-1**).

Operations

Operations of the future development allowed under the proposed PMPU would include transportation-related energy demand. Specifically, this demand would be associated with diesel and gasoline usage from maritime activity, district operations, as well employee and visitor trips. As shown in Table 4.6-16, gasoline and diesel fuel consumption would increase due to the implementation of the proposed PMPU. However, the PMPU would incorporate **MM-AQ-10**, **MM-AQ-11**, and **MM-AQ-12** as well as **MM-GHG-2** to help reduce any wasteful, inefficient, or unnecessary consumption of transportation-related energy resources during project operation. Implementation of **MM-AQ-10** through **MM-AQ-12**, and **MM-GHG-2** would reduce the transportation-related- fossil fuel use of future development to ensure the proposed PMPU does not result in potential wasteful, inefficient, or unnecessary consumption of energy resources (**Impact-EN-1**).

Appendix F Discussion

Table 4.6-17 evaluates the potential impacts of the proposed PMPU on energy using the criteria provided in Appendix F of the State CEQA Guidelines. Overall, the proposed PMPU would assist with energy conservation goals because it would promote energy efficiency and sustainability measures to reduce energy consumption. However, because of the increase in energy consumption relative to existing conditions, this impact is potentially significant, and mitigation is required to ensure energy efficiency and sustainability measures beyond existing regulations are incorporated into future project designs (**Impact-EN-1**).

Table 4.6-17. Proposed Project Comparison to State CEQA Guidelines Appendix F

Project Impact Considerations from Appendix F	Project Applicability and Analysis
Energy requirements and energy use efficiencies by amount and fuel type for each stage of the project.	Applies. See Tables 4.6-15 and 4.6-16, which break down construction and operational energy use. As indicated, future development with the proposed PMPU would increase the use of electricity and the need for fossil fuels such as diesel fuel, gasoline, and natural gas.
Effects on local and regional energy supplies and the need for additional capacity	Applies. Operation of future landside and waterside development associated with the proposed PMPU would potentially require upgrades to existing energy infrastructure to accommodate the increased energy demand of the proposed PMPU. Please see Section 4.15, <i>Utilities and Service Systems</i> , for an analysis of the potential environmental impacts associated with new or expanded energy infrastructure (i.e., electricity and natural gas facilities) resulting from implementation of the proposed PMPU. Implementation of various mitigation measures, most notably MM-AQ-9 , would require the implementation of various sustainability and energy-saving features in compliance with the District’s CAP which would reduce the overall energy demand of the proposed project, such as indoor water reduction measures, high-efficiency lighting systems, and “Cool Roofs.” Other measures, such as those to replace District fleet vehicles with zero-emission vehicles and to use clean or electric harbor craft during construction (MM-GHG-2 and MM-AQ-6), would reduce fossil fuel consumption over the life of the proposed PMPU. As such, adverse effects on local or regional energy supplies as a result of the proposed PMPU would be less than significant.
Effects of the project on peak and base period demands for electricity and other forms of energy	Applies. Energy load would vary over time, and it is anticipated that current energy supply and infrastructure would be able to accommodate the additional demand without interruption or issues to existing customers and without the need for new infrastructure. However, because the proposed PMPU is a long-range plan extending to 2050 and the specific location, timing, design specifications of future development is unknown, there is a potential that new or upgraded infrastructure may be required. Please see Section 4.15 for an analysis of the potential environmental impacts associated with new or expanded energy infrastructure (i.e., electricity and natural gas facilities) resulting from implementation of the proposed PMPU. As discussed above, implementation of MM-AQ-6 , MM-AQ-9 , and MM-GHG-2 would be required, which would ensure the project does not result in the

Project Impact Considerations from Appendix F	Project Applicability and Analysis
Degree to which the project complies with existing energy standards	<p>efficient or wasteful use of energy. With implementation of these mitigation measures, the PMPU does not propose demand that is expected to affect peak and base-period demand.</p> <p>Applies. The proposed PMPU would be fully compliant with all existing energy standards, including the Clean Energy and Pollution Reduction Act of 2015, Energy Building Regulations and Energy Conservation Standards, and California Energy Code (Title 24). Additionally, implementation of MM-AQ-9 would require all tenants to implement sustainability measures in building design, and MM-AQ-10 would require all hotels to reduce fuel combustion prior to 2030 and all development to be carbon neutral starting in 2030 (or earlier if required per law); both measures would reduce energy consumption.</p>
Effects of the project on energy resources	<p>Applies. The proposed PMPU would not result in an adverse impact on energy resources such as electricity, natural gas, and solar. There are sufficient energy resources to accommodate the additional project energy demand, and implementation, and MM-AQ-9, MM-AQ-10, and MM-GHG-2 would require the implementation of various sustainability and energy-saving features, including those prescribed in the District's CAP.</p>
Projected transportation energy use requirements and overall use of efficient transportation alternatives	<p>Applies. The proposed PMPU would increase the need for fossil fuels compared to baseline conditions because it would introduce new uses to the proposed PMPU area that would increase transportation energy use. The construction of hotels, marina, restaurant(s), retail, and other general tourist/visitor-serving commercial uses would result in new motor vehicle trips, while future in-water development such as new boat slips would increase the number of recreational boats operating, which would result in use of both gasoline and diesel fuel. However, MM-AQ-9 and MM-AQ-10 would require the incorporation of sustainability measures for future development to reduce impacts on energy resource. MM-AQ-11 requires the District to develop and implement an EV charging program, and MM-AQ-12 requires dockside electrical infrastructure to be installed to serve docked boats. MM-TRA-3 requires future project proponents to implement TDM measures, by reducing vehicle trips and promoting alternative forms of transportation, which will reduce transportation energy use during construction and operation. Overall, implementation of these measures would decrease the proposed PMPU's need for fossil fuels compared to unmitigated conditions.</p>

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources. The proposed PMPU includes several policies that would promote energy efficiency and conservation, including SR Policy 3.1.3 (deployment of renewable energy technology to improve energy reliability), SR Policy 3.1.5 (coordination with Tidelands' tenants and adjacent local businesses to reduce resource consumption and promote sustainable operations.), SR Policy 3.1.6

(promotion of the innovative use of “green” design), and SR Policy 3.1.7 (water conservation strategies).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources (**Impact-EN-1**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction and operational activities associated with Option 1 would be similar to those analyzed above because they would be associated with the same water and land uses and infrastructure improvements. While development associated with Option 1 would require energy during construction and operation, it is not anticipated that a Waterfront Destination Park would require a significant amount of energy during construction or operation relative to regional demand such that it would result in the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, potential impacts for wasteful, inefficient, or unnecessary consumption of energy resources associated with Option 1 would be less than significant. Moreover, compliance with PMPU policies SR Policy 3.1.3, SR Policy 3.1.5, SR Policy 3.1.6, and SR Policy 3.1.7 would further reduce energy usage associated with Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources (**Impact-EN-1**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would include the same water and land uses analyzed above that could increase energy use during construction and operation. While future development under Option 2 would require energy during construction or operation, it is not anticipated that new park space would require a significant amount of energy during construction and operation relative to regional demand such that it would result in the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, potential impacts for wasteful, inefficient, or unnecessary consumption of energy resources would be less than significant. Moreover, compliance with PMPU policies SR Policy 3.1.3, SR Policy 3.1.5, SR Policy 3.1.6, and SR Policy 3.1.7 would further reduce energy usage associated with Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources (**Impact-EN-1**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would include the same water and land uses analyzed above that could increase energy use during construction and operation. While future development under Option 3 it is not anticipated that new park space would require a significant amount of energy during construction or operation relative to regional demand such that it would result in the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, potential impacts for wasteful, inefficient, or unnecessary consumption of energy resources would be less than significant. Moreover, compliance with PMPU policies SR Policy 3.1.3, SR Policy 3.1.5, SR Policy 3.1.6, and SR Policy 3.1.7 would further reduce energy usage associated with Option 3.

Impact Determination and Mitigation

Implementation of the proposed PMPU would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation of the proposed PMPU.

Significant Impacts

Impact-EN-1: Potential Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources. Implementation of the proposed PMPU would have the potential to result in the wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation.

Mitigation Measures

For **Impact-EN-1**:

Implement **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, and **MM-AQ-9** through **MM-AQ-12**, as described in Section 4.2.

Implement **MM-GHG-1** and **MM-GHG-2**, as described under Threshold 1 above.

Implement **MM-TRA-3**, as described in Section 4.14.

Level of Significance After Mitigation

As shown in Tables 4.6-17 and 4.6-18, with implementation of **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, and **MM-AQ-9** through **MM-AQ-12**, as well as **MM-GHG-1**, and **MM-GHG-2**, construction and operational energy use (**Impact-EN-1**) would be reduced. Therefore, the proposed PMPU would not result in the wasteful, inefficient, or unnecessary use of energy, and impacts would be less than significant after mitigation.

Threshold 4: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Impact Analysis

State and local renewable energy and energy efficiency plans that are applicable to the proposed PMPU are discussed above in Section 4.6.3. State plans, California Title 24 energy efficiency standards, SB 350, and SB 100 contain required standards related to energy efficiency and renewable energy development. The proposed PMPU is required to comply with the State and local plans and regulations, all of which are aimed at increasing energy efficiency and renewable energy development. Some plans and regulations are statewide and do not require local or project action to implement. Table 4.6-18 provides a consistency analysis with State and local energy plans and regulations.

Table 4.6-18. Proposed Project Consistency with State and Local Energy Plans and Regulations

Regulation, Plan, or Policy	Project Applicability and Consistency
Clean Energy and Pollution Reduction Act of 2015 (SB 350)	Consistent without Mitigation. The Clean Energy and Pollution Reduction Act of 2015 requires the following by 2030: (1) an RPS of 50% and (2) a doubling of efficiency for existing buildings. The RPS is dependent on the utility provider and the project does not impede reaching a goal of 50%.
Energy Building Regulations and Energy Conservation Standards (Title 20, Energy Building Regulations; Title 24, Energy Conservation Standards)	Consistent without Mitigation. Implementation of the proposed PMPU would result in the construction of energy efficient buildings that would comply with existing building codes and may replace older less efficient structures. At a minimum, new construction occurring under the proposed PMPU would be required to comply with the current Title 24 building standards, which include a broad set of requirements for energy conservation and green design. Moreover, the project would incorporate MM-AQ-9 , which would require all tenants to implement sustainability measures in building design, and MM-AQ-10 , which would require all development to be carbon neutral starting in 2030 (or earlier if required per law). While these mitigation measures are not necessary for consistency with the Energy Building Regulations and Energy Conservation Standards, MM-AQ-9 and MM-AQ-10 would help reduce energy consumption.
The 100 Percent Clean Energy Act of 2018	Consistent without Mitigation. SB 100 increases the RPS target set in SB 350 to 60% by 2030. It also requires all retail sales of electricity to California end-users and electricity procured to serve State agencies to be provided by zero-carbon resources by 2045. Building energy efficiency is expected to increase as a result of compliance with Title 24 building codes, which are expected to move toward zero net energy for newly constructed buildings. The proposed PMPU would not hinder implementation of SB100 since it is not an energy infrastructure project that would have retail sales of electricity.
San Diego Unified Port District Climate Action Plan (CAP)	Consistent with Mitigation. As detailed in Table 4.6-13, the proposed PMPU would be inconsistent with the District’s CAP without implementation of mitigation. The CAP includes an inventory of existing and projected emissions in 2020, 2035, and 2050 and identifies the District’s GHG reduction goals and measures to be implemented to support meeting the statewide reduction goals set

Regulation, Plan, or Policy	Project Applicability and Consistency
Green Port Policy (BPC 736) and Program	<p>forth in AB 32. As discussed in Threshold 2, future development under the proposed PMPU would comply with the District's CAP with promotion of zero net energy buildings through MM-AQ-9 and MM-AQ-10, creation of a fleet using alternative fuel, electric, or hybrid vehicles through MM-GHG-2, and use of shore power for marinas under MM-AQ-12. Thus, with implementation of MM-AQ-9, MM-AQ-10, MM-GHG-2, and MM-AQ-12, the proposed PMPU would be consistent with the energy goals of the CAP.</p> <p>Consistent without Mitigation. The Green Port Policy was designed to achieve the District's environmental sustainability goals in six key areas: water, energy, air, waste management, sustainable development, and sustainable business practices. The policy establishes guiding principles to achieve long-term environmental, societal, and economic benefits through resource conservation, waste reduction, and pollution prevention. As detailed in Chapter 3, the proposed PMPU would adhere and further implement the sustainability goals identified in the District's Green Port Policy.</p>
SB 375 and SANDAG's San Diego Forward: The Regional Plan	<p>Consistent without Mitigation. SANDAG's Regional Plan established a long-range blueprint for the San Diego region's growth and development through the year 2050. Because the proposed PMPU would not include any components that would result in substantial unplanned population growth it would be consistent with the Regional Plan. In addition, the proposed PMPU would also result in large-scale alterations to the circulation system in order to improve efficiency and reduce traffic (VMT) along the roadways, to provide infrastructure for transit opportunities, and pedestrians and bicyclists with improved travel routes, and to establish mobility hubs to meet the needs of the visitors to the proposed PMPU area, which would be consistent with the goals of SB 375 and SANDAG's Regional Plan.</p>
SANDAG Regional Energy Strategy	<p>Consistent without Mitigation. SANDAG's RES established long-term goals related to energy efficiency, renewable energy, distributed generation, and transportation fuel, among others. The strategies and goals found in the RES were used as guidance for development of the energy components of the 2050 RTP/SCS.</p> <p>Proposed PMPU ECON Policy 2.3.2 requires coordination for the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. This policy supports land use and transportation planning strategies that reduce energy use and GHG emissions.</p>

As shown in Table 4.6-18, future development under the proposed PMPU would be consistent with statewide renewable energy or energy efficiency plans and regulations, but would not be consistent with local plans, such as the District's CAP, prior to mitigation. Because the proposed PMPU may result in an inconsistency with the adopted CAP, impacts would be significant prior to mitigation (**Impact-EN-2**).

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Rather, the proposed PMPU includes several policies that would promote energy efficiency and conservation, including SR Policy 3.1.3 (deployment of renewable energy technology to improve energy reliability), SR Policy 3.1.5 (coordination with Tidelands' tenants and adjacent local businesses to reduce resource consumption and promote sustainable operations.), SR Policy 3.1.6 (promotion of the innovative use of "green" design), and SR Policy 3.1.7 (water conservation strategies).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to conflicting with or obstructing a State or local plan for renewable energy or energy efficiency (**Impact-EN-2**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction and operational activities associated with Option 1 would be similar to those associated with the proposed PMPU because they would be associated with the same water and land uses and infrastructure improvements. Construction and operation of Option 1 would be required to comply with the State and local plans and regulations, all of which are aimed at increasing energy efficiency and renewable energy development. However, because implementation of Option 1 may result in an inconsistency with the adopted CAP, impacts would be significant prior to mitigation (**Impact-EN-2**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to conflicting with or obstructing a State or local plan for renewable energy or energy efficiency (**Impact-EN-2**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 2 would include the same water and land uses analyzed above. Construction and operation of Option 2 would be required to comply with the State and local plans and regulations, all of which are aimed at increasing energy efficiency and renewable energy development. However, because implementation of Option 2 may result in an inconsistency with the adopted CAP, impacts would be significant prior to mitigation (**Impact-EN-2**). However, this

would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to conflicting with or obstructing a State or local plan for renewable energy or energy efficiency (**Impact-EN-2**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Option 3 would include the same water and land uses analyzed above. Construction and operation of Option 3 would be required to comply with the State and local plans and regulations, all of which are aimed at increasing energy efficiency and renewable energy development. However, because implementation of Option 3 may result in an inconsistency with the adopted CAP, impacts would be significant prior to mitigation (**Impact-EN-2**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Impact Determination and Mitigation

Implementation of the proposed PMPU would conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Significant Impacts

Impact- EN-2: Potential Inconsistency with Applicable Energy Use Reduction Plans. The proposed PMPU would be consistent with statewide renewable energy or energy efficiency plans and regulations, but would not be consistent with local plans, such as the District's CAP, prior to mitigation. This would be considered a significant impact prior to mitigation.

Mitigation Measures

For **Impact-EN-2**:

Implement **MM-AQ-9**, **MM-AQ-10**, **MM-AQ-11**, and **MM-AQ-12**, as described in Section 4.2.

Implement **MM-GHG-2**, as described in Threshold 1.

Level of Significance After Mitigation

Implementation of **MM-AQ-9**, **MM-AQ-10**, **MM-AQ-11**, **MM-AQ-12**, and **MM-GHG-2** would ensure compliance with the District's CAP. These measures include relevant emission-reducing measures from the District CAP through; promotion of zero net energy buildings through **MM-AQ-11**, creation of a fleet using alternative fuel, electric or hybrid vehicles through **MM-GHG-2**, and use of shore power for marinas under **MM-AQ-12**. As such, any potential inconsistency would be avoided and **Impact-EN-2** would be reduced to less than significant after mitigation.

4.6.5 Cumulative Impact Analysis

There would be the potential for a cumulatively considerable GHG-related impact if the proposed PMPU would be inconsistent with statewide reduction planning efforts or the District's CAP; in conflict with regulatory programs outlined in the Scoping Plan and adopted by CARB or other California agencies to reduce GHG emissions; inconsistent with the post-2020 reduction targets set forth through California EO S-03-05, B-55-18, and SB 32; or in conflict with plans, policies, and regulations promulgated to reduce GHG emissions beyond the 2020 timeframe.

A significant cumulative impact on energy would result if the proposed PMPU would contribute to a cumulatively considerable environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation, or conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

4.6.5.1 Geographic Scope

GHG Emissions

Climate change is a cumulative issue, and the geographic scope for cumulative GHG emission impacts is global. Because climate change is the result of cumulative global emissions, no single project, when taken in isolation, can cause climate change—a single project's emissions are insufficient to change the radiative balance of the atmosphere. Because climate change is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, cumulative GHG emissions that contribute to global climate change will have a significant cumulative impact on the natural environment as well as on human development and activity. The global increase in GHG emissions that has occurred and will occur in the future is the result of the actions and choices of individuals, businesses, local governments, states, and nations. Furthermore, although climate change impacts will likely vary by geography and intensity, the impacts that will result from cumulative global emissions will be felt worldwide. The GHG analysis above is inherently a cumulative analysis.

Energy

The geographic scope for cumulative impacts for energy usage includes the SDG&E service area, which is the entire County.

4.6.5.2 Cumulative Effects from Past, Present, and Probable Future Projects

GHG Emissions

Past, present, and probable future projects, plans, and programs throughout the region, state, nation, and world, including growth assumed by SANDAG as well as those additional plans and programs shown in Table 2-2 of Chapter 2, *Project Description*. Each of these plans and programs would potentially contribute cumulative impacts related to global climate change. As with the proposed PMPU, all the projects, plans, and programs, along with all other projects within the county, state, and region, would be required to comply with all applicable Federal, State, and local policies and regulations regarding GHG emission reductions (e.g., SB 32, Pavley 1, Advanced Clean Cars,

Renewables Portfolio Standard, SB 350, SB 100). However, GHG emissions from past, present, and probable future projects have contributed to, and will continue to contribute to, a cumulatively significant impact.

Energy

A cumulative energy consumption impact would occur if development associated with plans and programs identified in Table 2-2 or within the geographic scope of the cumulative impact analysis for energy use, combined with the proposed PMPU, resulted in wasteful, inefficient, or unnecessary consumption of energy resources throughout the region. The cumulative plans and programs listed in Table 2-2 would result in the redevelopment of urbanized areas that are currently served by SDG&E, and the development of the cumulative projects would not result in an expansion of SDG&E's service area. However, the cumulative projects would result in increases in energy demand compared to existing conditions, especially for plans which would develop undeveloped sites that would result in new energy demand. As required by the CPUC, California utilities, including SDG&E, are required to file long-term energy resources plans with the CPUC. SDG&E's most recent long-term procurement plan was filed in October 2014 and includes plans and strategies to meet the future energy demands of its customers, including a plan addressing the closure of the San Onofre Nuclear Generating Station. SDG&E would continue to import electricity and natural gas to meet regional demand; however, an increase in imported energy to meet demand could result in high energy prices and unreliable supply. SANDAG adopted an RES in 2009, which was updated in 2014 to specifically address regional energy supply. The RES includes proposed Early Actions to promote long-term energy efficiency and availability in the region. If the cumulative projects would not support the implementation of applicable Early Actions from the RES, a cumulative impact could occur. The cumulative projects would be required to comply with the Title 24 energy efficiency standards, which promote energy efficiency and reduce inefficient, wasteful, and unnecessary consumption of energy. However, Title 24 does not require additional measures to support the other RES Early Actions, including supporting alternative transportation to reduce transportation energy use, reducing GHG emission from energy use, and limiting water use to reduce indirect energy use for water transport. As such, it is possible that present and probable future plans and programs would not comply with all programs and policies designed to reduce energy demand. Therefore, impacts from past, present, and probable future plans and programs may be cumulatively significant.

4.6.5.3 Project Contribution

GHG Emissions

As discussed under Threshold 1, the proposed PMPU would contribute GHG emissions to the cumulative condition. As shown in Table 4.6-10, buildout of the proposed PMPU would result in a net increase in GHG emissions over existing conditions, resulting in -cumulatively-considerable impact prior to mitigation. This increase in emissions would exceed the applicable efficiency metric for both 2030 and 2050, which would conflict with statewide emission reduction planning efforts prior to mitigation (**Impact-C-GHG-1**). With implementation of **MM-AQ-2** and **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-12**, **MM-GHG-1**, and **MM-GHG-2**, emissions from the proposed PMPU would be reduced to below the efficiency metric in 2030, but remain in excess of the efficiency metric for 2050. However, because it cannot be stated with certainty that the project would result in emissions that would represent a fair share of the requisite reductions toward the statewide carbon neutrality

goal, impacts would remain significant for both 2030 and 2050. Therefore, after mitigation, the proposed PMPU would result in cumulatively considerable impacts related to 2030 and 2050 because it would impede achievement of the State reduction targets and goals, and **Impact-C-GHG-1** would be cumulatively considerable and unavoidable.

As discussed under Threshold 2, the proposed PMPU would be inconsistent with relevant GHG reduction plans, policies, and regulations (**Impact-C-GHG-2**), which is considered a cumulatively considerable contribution to significant cumulative GHG impacts. With implementation of **MM-AQ-2** and **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-12**, **MM-GHG-1**, and **MM-GHG-2**, the proposed PMPU would be consistent with the CAP, the Scoping Plan, and other statewide reduction policies and plans. Therefore, after mitigation, the proposed PMPU would result in a less than cumulatively considerable contribution to cumulative impacts related to consistency with relevant plans, policies, and regulations adopted to reduce GHG emissions.

Energy

As discussed under Threshold 3, the proposed PMPU would result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, which, when combined with the cumulative projects listed in Table 2-2, would be cumulatively considerable prior to mitigation (**Impact-C-EN-1**). However, mitigation that would promote energy efficiency and sustainability measures to reduce energy consumption and promote installation of renewable energy (**MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, **MM-AQ-9**, **MM-AQ-10**, **MM-AQ-12**, **MM-GHG-1**, and **MM-GHG-2**) would reduce energy demand and fossil fuel use of future development to ensure that future development projects under the proposed PMPU do not result in potential wasteful, inefficient, or unnecessary consumption of energy resources.

As discussed under Threshold 4, the proposed PMPU also would conflict with or obstruct a local plan for renewable energy or energy efficiency, as the proposed PMPU would not be consistent with the District CAP before mitigation because it does not include measures specific to the CAP (**Impact-C-EN-2**). Implementation of **MM-AQ-9** through **MM-AQ-12** and **MM-GHG-2** would ensure compliance with the District's CAP. Therefore, the proposed PMPU would not conflict with State and local renewable energy and energy efficiency plans after mitigation. When combined with the cumulative projects listed in Table 2-2, which would also be required to be designed in compliance with the building energy efficiency standards of Title 24 of the California Building Code and to comply with any applicable State plans for renewable energy or energy efficiency to the extent required by law, cumulative impacts would be less than significant, and the proposed PMPU's contribution to cumulative energy impacts would not be cumulatively considerable after mitigation.

4.6.5.4 Cumulative Impact Determination and Mitigation

GHG Emissions

The proposed PMPU's incremental contribution to cumulative GHG impacts would be cumulatively considerable prior to mitigation. The potential cumulatively considerable impacts are as follows.

Impact-C-GHG-1: Inconsistency with the Statewide Reduction Targets for 2030 and 2050

Impact-C-GHG-2: Conflict with Plans, Policies, and Regulations

Mitigation Measures

For **Impact-C-GHG-1**:

Implement **MM-AQ-2** and **MM-AQ-3**, and **MM-AQ-6** through **MM-AQ-12**, as described in Section 4.2.

Implement **MM-GHG-1** and **MM-GHG-2**, as described in Threshold 1 above.

For **Impact-C-GHG-2**:

Implement **MM-AQ-2**, **MM-AQ-3**, and **MM-AQ-6** through **MM-AQ-12**, as described in Section 4.2.

Implement **MM-GHG-1** and **MM-GHG-2**, as described in Threshold 1 above.

Level of Significance After Mitigation

Implementation of **MM-AQ-2** and **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-12**, and **MM-GHG-1** and **MM-GHG-2** would reduce **Impact-C-GHG-1** to less than significant levels. Therefore, **Impact-C-GHG-1** would be less than cumulatively considerable after mitigation.

Implementation of **MM-AQ-2** and **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-12**, and **MM-GHG-1** and **MM-GHG-2** would reduce **Impact-C-GHG-2** to the extent feasible. However, **Impact-C-GHG-2** would remain cumulatively considerable and unavoidable.

Energy

The proposed PMPU's incremental contribution to cumulative energy impacts would be cumulatively considerable prior to mitigation. The potential cumulatively considerable impacts are as follows.

Impact-C-EN-1: Potential Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources

Impact-C-EN-2: Potential Inconsistency with Applicable Energy Use Reduction Plans

Mitigation Measures

For **Impact-C-EN-1**:

Implement **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, **MM-AQ-9**, **MM-AQ-10**, and **MM-AQ-12**, as described in Section 4.2.

Implement **MM-GHG-1** and **MM-GHG-2**, as described in Threshold 1 above.

For **Impact-C-EN-2**:

Implement **MM-AQ-9** through **MM-AQ-12**, as described in Section 4.2.

Implement **MM-GHG-2**, as described in Threshold 1 above.

Level of Significance After Mitigation

Implementation of **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, **MM-AQ-9**, **MM-AQ-10**, **MM-AQ-12**, **MM-GHG-1**, and **MM-GHG-2** would reduce **Impact-C-EN-1** to less-than-significant levels. Therefore, **Impact-C-EN-1** would be less than cumulatively considerable.

Implementation of **MM-AQ-9** through **MM-AQ-12** and **MM-GHG-2** would reduce **Impact-C-EN-2** to less-than-significant levels. Therefore, **Impact-C-EN-2** would be less than cumulatively considerable.

Section 4.7

Hazards and Hazardous Materials

4.7.1 Overview

This section describes the existing conditions and laws and regulations for hazards and hazardous materials, followed by an analysis of the proposed Port Master Plan Update’s (PMPU’s) potential to (1) create a significant hazard to the public or environment, (2) emit hazardous emissions or handle hazardous materials within 0.25 mile of a school, (3) be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, (4) be located within an airport land use plan and result in a safety hazard for people residing or working in the proposed PMPU area, and (5) impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. All other potential hazards and hazardous materials issues, including safety hazards associated with private airstrips and exposing people or structures to a significant risk involving wildland fires, were analyzed in Section VIII of the Initial Study/Environmental Checklist (see Appendix A) and determined to have no impact. The analysis and conclusions regarding these impacts are also summarized in Chapter 5, Section 5.4, *Effects Found Not to Be Significant*. In certain cases, information about water quality and sediment contamination is discussed in this section; however, greater detail regarding the proposed PMPU’s potential impacts on water quality are provided within Section 4.8, *Hydrology and Water Quality*.

Information on hazardous materials in this section is summarized from the *Hazardous Materials Technical Study, Integrated Planning Port Master Plan Update, San Diego Unified Port District, San Diego, California* prepared by Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo & Moore) for the PMPU (2017), provided as Appendix G.

Table 4.7-1 summarizes the significant impacts and mitigation measures (MMs) in Section 4.7.4.4, *Project Impacts and Mitigation Measures*.

Table 4.7-1. Summary of Significant Hazards and Hazardous Materials Impacts and Mitigation Measures

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-HAZ-1 and Impact C-HAZ-1: Possible Onsite Contamination	PD1, PD2, PD3, PD4	MM-HAZ-1: Conduct an Environmental Site Assessment, Prepare a Remediation Plan, and Remediate Accordingly	Less than Significant	MM-HAZ-1 would ensure that proper due diligence is conducted; and if contaminated material is encountered, ensure it would be handled safely and correctly through evaluation, characterization, and application of best practices by a qualified environmental professional.

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-HAZ-2 and Impact-C-HAZ-2: Potential to Encounter Undocumented Contamination During Reasonably Foreseeable Construction Activities	All planning districts	MM-HAZ-1 , as described above MM-HAZ-2: Identify Unknown Hazardous Materials Encountered During Construction	Less than Significant	MM-HAZ-1 , would ensure a site that is potentially contaminated is identified and any contamination encountered is handled safely through evaluation, characterization, and application of best practices by a qualified environmental professional. MM-HAZ-2 would ensure previously unknown hazardous materials encountered during construction would be properly characterized and handled.
Impact-HAZ-3 and Impact-C-HAZ-3: Potential to Encounter Lead or Organochlorine Pesticides in Soil During Reasonably Foreseeable Construction Activities	All planning districts	MM-HAZ-1 and MM-HAZ-2 , as described above	Less than Significant	MM-HAZ-1 would ensure a site that is potentially contaminated is identified and any contamination encountered is handled safely through evaluation, characterization, and application of best practices by a qualified environmental professional. MM-HAZ-2 would ensure previously unknown hazardous materials encountered during construction would be properly characterized and handled.
Impact-HAZ-4 and Impact-C-HAZ-4: Potential to Encounter Contamination On Site Due to Listing on a Hazardous Materials Database	All planning districts	MM-HAZ-1 and MM-HAZ-2 , as described above	Less than Significant	MM-HAZ-1 would ensure a site that is potentially contaminated is identified and any contamination encountered is handled safely through evaluation, characterization, and application of best practices by a qualified environmental professional. MM-HAZ-2 would ensure previously unknown hazardous materials encountered during construction would be properly characterized and handled.

4.7.2 Existing Conditions

The following section describes the existing hazard and hazardous materials conditions within the proposed PMPU area. This section provides a general history of the proposed PMPU area followed

by an overview of historical activities within each planning district (PD), a summary of known contamination and related regulatory actions, and a summary of the findings from hazardous materials databases for each planning district. Please note, the term *hazardous materials* refers to hazardous waste or other contaminants, for example petroleum products or lead-based paint, while the term *contaminated media* refers to the substance that has been affected by the release of a hazardous material, including soil, sediment, or groundwater.

4.7.2.1 PMPU Area Historical Overview

During the height of the land boom in San Diego in the 1880s, which was driven by railroad development in the region, San Diego Bay had six privately developed wharfs. The City of San Diego became involved in development in the Bay in the 1910s. In 1911, the State of California instituted a policy of handing over control of Tidelands to local governments that agreed to invest at least \$1,000,000 in Tidelands improvements. In May 1919, the City of San Diego's first mayor-appointed Harbor Commission and Port Director began managing the Tidelands within the city limits (ICF International 2016:16, Reupsch 1970a:2-3, District 1974:2-3.). The City of San Diego completed a municipal wharf, that is now known as Broadway Pier, in 1916, and a second municipal pier, now known as B Street Pier, was completed in 1926. (ICF International 2016:16-18.)

Federal military investment also shaped the development of the San Diego bayfront for the first half of the twentieth century. In the years 1916 and 1917 the West Coast Marine Corps Advance Base, the naval Hospital, and Rockwell Field were established in San Diego. By the mid-1920s, the Federal government had begun or completed the Destroyer Base (today's Naval Base San Diego), the Naval Training Station, the Eleventh Naval District Supply Center, the Marine Corps Recruit Base, the naval Radio Station, the Fleet Fuel Depot, the U.S. Coast Guard Base, and Fort Rosecrans. Economic and population growth driven largely by the military development resulted in industrial, commercial, and civic development along the bayfront. A commercial fishing industry developed during this time, accompanied by the supporting canneries and shipbuilding industries.

During the early 1900s the bayfront was often used as a location for waste disposal. Raw sewage was dumped into the Bay starting in the early 1900s, and several waste dumps were located along the shoreline, including two near Chollas Creek. Refuse burning on the Tidelands has been recorded as occurring at the 8th Avenue Tidelands Dump (in the vicinity of current-day Tenth Avenue Marine Terminal [TAMT]) and at the Newton Avenue Dump (in the vicinity of current-day PD4) (District 2016). The City of San Diego constructed a garbage incinerator along the bayfront in the vicinity of the dumping areas sometime between 1906 and 1921 on land formed from trash deposits and dredged fill material, which gradually expanded the shoreline (District 2012, Seymour 2013). Other uses along the Tidelands at this time were recreational, including the San Diego Rowing Club clubhouse constructed in 1900, and industrial, such as lumberyards that received lumber by water, shipyards building and repairing ships, fish canning and packing plants, and wharfs. Railyards and railroads were constructed along the Tidelands to support the industries along the Bayfront. Manufacturing also had a presence along the bayfront; the National Steel and Shipbuilding Company (NASSCO) was first formed as the California Iron Works in 1905 (later renamed as National Iron Works, then NASSCO) and operated as a steel foundry and steel plant until it shifted to building ships, machines, and tanks by the 1930s and 1940s. Shipbuilders in the early 1900s, including the San Diego Marine Construction Company (formerly located at the foot of Sampson Street) and Walter Benzanson's Robbins Machine Company (at the foot of Date Street) built commercial fishing vessels for the fishing industry.

During the Great Depression and World War II, Federal public works agencies such as the Civil Works Administration and Works Progress Administration (WPA) were responsible for projects in the Bay such as dredging, Tideland fill to expand the waterfront, and new wharfs and mole piers. The original San Diego Civic Center (now the San Diego County Administration Center) was a WPA-funded project completed in 1938. (City of San Diego 2007:29–30; Harbor Department 1948:26–28, 32–40, 70–78.)

In post-World War II San Diego (1945–1968), the City sought to grow the Bay into a more competitive commercial port. Also during this period, recreational uses and tourism became increasingly important elements of Bay planning and development. Shelter Island, built out of channel dredging material added to an existing shoal, was completed in 1950, and Harbor Island, constructed out of dredging to deepen the channel from the Bay entrance to North Island facilities, was completed in 1961. These islands were developed with hotels, restaurants, yacht clubs, and other recreational facilities, which became important elements in the growing tourism industry. City of San Diego leadership also sought to grow the shipping abilities of the Bay. Voter-approved bonds funded the development of the TAMT, which opened for business with two large transit sheds in 1958. The Twenty-Fourth Street Marine Terminal was constructed in 1968, and would later become the modern shipping facility now known as National City Marine Terminal. (Gross 1983:A-14; ICF International 2016:22–23, 24–25; District 1974:4, 6–7; Reupsch 1970a: 8–9.)

The extensive industrial and military uses and waste disposal practices common during the first half of the twentieth century resulted in the polluted discharges into the Bay, the underlying sediment, and the Tidelands. Given the intensity of these uses, additional background and historic context is provided for PD1, PD2, PD3, and PD4. Planning District 7, PD8, PD9, and PD10 did not have the same intensity of historical uses leading to hazardous conditions, though there is limited information about their historical uses and any resulting contamination. Details of known contamination within all planning districts in the proposed PMPU area is provided in Section 4.7.2.2, *Known Contamination Within the Proposed PMPU Area*.

Planning District 1: Shelter Island

Shelter Island, built out of channel dredging material added to an existing shoal, was completed in 1950. Construction of Shelter Island created harbors to the east (America’s Cup Harbor [formerly Commercial Basin]) and west (Shelter Island Yacht Basin). This planning district comprises two subdistricts: the East Shelter Island Subdistrict, which includes the adjacent lands surrounding America’s Cup Harbor; and the West Shelter Island Subdistrict, which includes the adjacent lands surrounding the Shelter Island Yacht Basin. Since the early 1950s, the area has historically been developed for ship building, repair, fueling, and painting, as well as for marina and maritime-related activities (Kleinfelder 2019).

Planning District 2: Harbor Island

Harbor Island in its current configuration, was constructed between 1920 and 1961 using dredge material from the Bay main navigation channel (AMEC 2016). This planning district comprises the two basins created by the “T” shape Harbor Island (East Basin and West Basin) and the adjacent lands to the north of the basins along Harbor Drive and Convair Lagoon at the east end of the East Basin.

The Harbor Drive Test Facility (HDTF), located on the north shore of the East Basin, was owned and operated by Convair/General Dynamics, which developed the site to support aircraft, rocket engine, and military weapons testing and other testing and research activities. Development and operation of the site began in 1942 and continued through the 1960s. The HDTF supported a variety of government and commercial programs until approximately 1996. Site decommissioning began in the late 1990s, and the property was repurposed for use as rental car facilities.

The north-central portions of the HDTF were subleased to Gulf General Atomic Division in the late 1960s, and then to Universal Oil Products Inc. in the late 1970s (Groundwater Technology 1992). The western portion of the site, known as Tow Basin, was subleased to Lockheed Ocean Labs in the late 1970s. The Tow Basin facility housed an open top concrete water tank used to test hull designs of boats. Lockheed purchased the Tow Basin and associated building and leased the surrounding property from the San Diego Unified Port District (District) in the late 1970s. In 1983, Rohr Marine Incorporated (RMI) purchased the Tow Basin and associated building and leased the surrounding property from the District. The District took ownership of the Tow Basin and associated building in 1986 (McLaren 1999).

The Lockheed Marine Terminal and Railway facility was first leased by Lockheed Aircraft Company in 1966. At the time the site included a recently constructed (1965–1966) building, a pier, and a railway that extended into the East Basin. Lockheed owned and operated Deep Submergence Vehicles (DSVs) out of the facility, and in the early 1970s, the U.S. Navy also operated DSV Programs and Deep Submergence Rescue Vehicles. Later uses of the facility included docking and off-loading of manganese nodules, prefabrication and testing of shipboard cables for power and data transfer, storage and staging of equipment and chemicals for array resurfacing, and prefabrication and testing of cathodic protection equipment for oil rigs (Tetra Tech 2012).

Storm water from the HDTF/Tow Basin and Marine Terminal and Railway facilities drained to a series catch basins or drainage channels with outfalls discharging to the Bay. Chemicals present or used at these facilities, included polychlorinated biphenyls (PCBs), organochlorine pesticides, volatile organic compounds (VOCs), petroleum hydrocarbons, mercury, copper and other metals, and these were transported to the Bay through stormwater and potentially other pathways.

The former Teledyne Ryan (TDY) facility was a 44-acre parcel located at the east end of the San Diego International Airport (SDIA) between Harbor Drive and the SDIA runway at 2701 North Harbor Drive. It should be noted that this facility is not within the planning district but has contributed to contamination in the proposed PMPU area. The facility operated primarily as a military aircraft manufacturing facility beginning in 1939 when it was leased to Ryan Aeronautical and later Teledyne Industries, Inc. (GeoSyntec 2005). TDY assets were sold to Northrup Grumman, and operations at the site ceased in 1999. The District terminated its lease with TDY in 2002. The facility was demolished around 2012 and is currently being used for SDIA parking and other airport-related operations.

During its operation, the TDY facility discharged wastes containing PCBs, metals, and VOCs through its stormwater collection system to the San Diego Bay and Convair Lagoon. Investigation and remediation of impacts on the Bay, as well as to the TDY leasehold began in 1988 and continued until 2015 when the San Diego Regional Water Quality Control Board (RWQCB) issued a No Further Action Letter, indicating no further remediation was recommended.

The former General Dynamics Lindberg Field Plant (GDLFP) facility occupied approximately 90 acres north of the SDIA, outside of the planning district. The site is currently leased to the San

Diego County Regional Airport Authority (SDCRAA) by the District and has recently undergone redevelopment to include a new rental car, fixed based operator, and airport parking facilities.

The Convair Division of General Dynamics occupied the former GDLFP site from 1935 through approximately 1996. Operations conducted by Convair during these years included: military and commercial aircraft production; weapon assembly; rocket and weapons testing; aircraft parts manufacturing; spray painting; tooling and maintenance; radioactive chemical handling, photography, and reproduction; engineering; and research and support facilities including boilers, air compressors and electrical transformers (Brown and Caldwell 1994). Industrial waste generated at the site included oil, fuels, acid and alkaline solutions, electroplating and anodizing solutions, solvents, paints and paint sludges, asbestos containing debris, and salvageable metals.

Stormwater from the northern and western portions of the GDLFP was collected in catch basins with an outfall in Convair Lagoon. Several phases of investigation and remediation were conducted in 1997 and 2004 to remove PCB-contaminated sediment from the GDLFP storm drain system and outfalls discharging to Convair Lagoon. Phase II site investigations conducted at the former GDLFP site in 2009 and 2010, prior to its redevelopment by the SDIA, found elevated concentrations of VOC in soil and groundwater and PCB in shallow soils at the site (Kleinfelder 2009). Remediation of the GDLFP site was completed as part of the North Side San Diego International Airport Redevelopment.

The SDIA has been operating at its current location since approximately 1928. It was owned and operated by the City of San Diego between 1928 and 1961, except for 1942 through 1945 when the U.S. Military and its contractors had control to support World War II operations. The District owned the SDIA from 1962 through 2002. In 2003, the San Diego County Regional Airport Authority took over operations and leased the property from the District. Wastes potentially generated by the SDIA include jet fuel, brake pad residuals, and various metals (see Section 4.9.2.2 for further information on historic contamination). Stormwater from the eastern portion of SDIA drained historically to the Laurel Hawthorn Central Embayment via the storm drain system (Brown and Caldwell 1997).

Stormwater runoff from the former TDY facility, the SDIA, and the former GDLFP discharged to Convair Lagoon through four outfalls. Sediment monitoring conducted within the Convair Lagoon by the RWQCB in 1983, 1984, and 1985 in the vicinity of these outfalls revealed elevated concentrations of PCBs in the sediments (CRWQCB 1986). Storm drain sampling conducted at the TDY facility, by the RWQCB in 1985, identified PCBs in the storm drain sumps at the site.

Planning District 3: Embarcadero

Laurel Hawthorn Embayment (LHE), located at the north end of the Embarcadero District, has been associated with industrial activities since the 1940s. The Solar Turbines (Solar) leasehold, located at 2200 Pacific Highway, is reclaimed Tidelands built up over the years with various types of rubble and fill material. The 27-acre parcel has been occupied by Solar since at least the mid-1940s. Prior to this, the buildings within the Solar complex were occupied by Solar, the Westgate Company, the Army Air Force, and others (Boyle 1968). Solar, currently a Caterpillar Company, owns and operates the facility, which manufactures industrial gas turbines. Up until approximately 1968, stormwater and industrial waste was discharged to the LHE through several outfalls owned by Solar and the City of San Diego. During repair activities conducted between 1998 and 2000 on one of the storm drains discharging to the LHE, PCB impacted sediment was found in the storm drain (ARCADIS 2000). A sediment investigation conducted within LHE in 2004 identified elevated concentration of PCBs in sediment samples collected off-shore of the Solar facility (UC Davis 2004).

Stormwater from the southern and eastern portions of the GDLFP site, SDIA, Pacific Highway, and potentially other upland locations was collected by an onsite system of catch basins and underground laterals that drained to stormwater control systems (SWCSs) with outfalls in the LHE. Portions of the SWCSs originate on City of San Diego property and are owned by the City of San Diego. Stormwater from the northern and western portions of the GDLFP was collected in catch basins and laterals that drain to a separate SWCS with an outfall in Convair Lagoon. For further details, see the discussion for PD2 above.

The property in the vicinity of Broadway Pier, B Street Pier, the former Lane Field, and the Naval Facilities Engineering Command was the site of numerous industrial activities dating back to the late 1800s (Ninyo and Moore 2006). Earliest uses included shipbuilding operations in the near terminus of Broadway dating back to 1887. The property was also the site of the Santa Fe freight house, the City Harbor Department Truck Facility and Equipment Yard, the Naval Broadway Complex, the Star & Crescent Boat Company, various warehouses, the San Diego Gas & Electric (SDG&E) Station B powerhouse and numerous other industrial facilities, military facilities, automobile service stations, and storage areas (Ninyo & Moore 2006). Many of these facilities used industrial chemicals that may have impacted soil and sediment in the adjacent San Diego Bay. The area between B Street and Broadway Piers was identified as impacted by polycyclic aromatic hydrocarbons (PAHs) by the RWQCB (Appendix G).

The south Embarcadero was the site of Campbell Machine Company and later the Campbell Shipyard. The former Campbell Shipyard was located at 501 East Harbor Drive. The site has been recently redeveloped to a hotel/marina and is currently bounded to the southeast by the TAMT; to the northwest by the South Embarcadero and the San Diego Convention Center; and to the northeast by Harbor Drive, the BNSF Railway, and the Metropolitan Transit System (MTS) Maintenance Yard.

Prior to 1926, the Campbell Shipyard site was Tidelands. The Bay shoreline was expanded bayward by several reclamation projects. Campbell Machine Company began an engine building and repair operation in the east parking lot of the site (foot of 8th Avenue) in 1908. The City of San Diego Refuse Incinerator and the Economy Waste Paper Company were also in operation at the foot of 8th Avenue at the time. Campbell Industries (Campbell), successor to Campbell Machine Company, began operations in 1926 primarily building commercial fishing vessels. In the early 1980s, its business shifted to Naval ship repair potentially due to the decline in the fishing industry. From approximately 1921 to the 1990s, the Campbell operations expanded into portions of adjacent properties occupied by Gould Hardware and Machinery, American Products Company, Arrow Transfer Company, and the San Diego Sports Arena. The site infrastructure included cranes, floating dry docks, marine railways, berth, piers and over water structures. Operation at the site included: formation and assembly of ship hulls; application of paints; installation and repair of mechanical, electrical and hydraulic systems; repair of damaged vessels; removal and replacement of expended/failed paint systems; and support systems for the ships and crew. Campbell also operated a fueling apron wharf, in conjunction with General Petroleum of California, which operated a fuel farm adjacent to and southeast of the Campbell site. Wastes generated by these operations included abrasive blast waste (i.e., spent grit, spent paint, marine organisms, rust), fresh paint, bilge waste/oil wastewater, hydro-blast waste water, oils, waste paints/sludges/solvents/thinners, construction and repair wastes, and other miscellaneous wastes typical of a ship building operation.

Planning District 4: Working Waterfront

The Working Waterfront (PD4) has been the location of concentrated industrial activity since the early 1900s. Significant early activities include the 8th Avenue Tidelands Dump and City refuse incinerator, working railyards and rail lines initially operated by the San Diego and Arizona Eastern Railway, the Atchison Topeka and Santa Fe Railroad, the Benson Lumber Company, the West Coast Crab & Lobster Company, Southern Reduction Company, fuel storage facilities and fueling docks, tuna docks and processing facilities kelp processing, and ship repair and construction activities. The leasehold currently occupied by Continental Maritime was a tuna processing facility until the 1980s. The leaseholds currently occupied by BAE Systems and General Dynamics/NASSCO have been active ship repair and construction facilities since at least the 1930s. CP Kelco has operated a Kelp processing facility at its current leasehold since the late 1920s (Geosyntec and Integral 2018). The former SDG&E Silvergate Power Plant, located on Sampson and Belt Streets northeast of the current BAE Systems facility, operated from 1940s until 1984. Cooling water intake and discharge tunnels extend from this facility to the Bay within the current BAE Systems leasehold (Geosyntec and Integral 2018). SDG&E also operated a manufactured gas plant (Station A) dating back to the 1920s, which may have used tunnels or channels connected to the Bay (Kleinfelder 2018).

The existing TAMT facility was constructed on the Tidelands in the mid-1950s following placement of dredged fill and material from San Diego Bay, from approximately 8th Avenue to Crosby Road. Portions of the TAMT facility were constructed over garbage and burned rubbish associated with the 8th Avenue Tidelands Dump and City refuse incinerator and land previously occupied by the Benson Lumber Company, West Coast Crab & Lobster Company, and Southern Reduction Company. Historically, the TAMT facility was used for truck and tractor sales and service, vehicle maintenance, fish oil manufacturing, and stock holding; and for material storage including lumber, petroleum, scrap metal, molasses, acid, grain, and fish oil. More recently, TAMT is used for import, storage, and offsite shipping of materials by tenants including Cemex, Dole Fresh Fruit Company, The Jankovich Company, International Materials Inc., Searles Valley Minerals, and San Diego Refrigerated Services (Kleinfelder 2018).

Shipbuilding and other manufacturing and industrial uses within, adjacent to, and upstream of PD4 have resulted in the discharge of metals including copper and zinc, PCBs, PAHs, and petroleum hydrocarbons to the Bay through stormwater runoff or direct discharges as the result of spills, paint overspray, the release of sandblast grit for paint removal, and other activities.

Planning District 7: South Bay

Planning District 7 consists entirely of salt marshes and open water within the Bay. The adjacent salt ponds to the east and west of PD7 have been historically developed with salt extraction sites. The South Bay Salt Works harvested salt from the salt ponds in south San Diego Bay from as early as 1871. The processing plant is located on land to the east of the ponds. In the 1920s California Chemical Corporation also removed chemicals from the salt pond water. In 1999 the salt ponds were sold to the San Diego County Regional Airport Authority, transferring the salt ponds to the U.S. Fish and Wildlife Service, which leased them for salt extraction.

Planning District 8: Imperial Beach Oceanfront

Planning District 8 consists predominantly of the beach and open ocean along the Imperial Beach oceanfront, the Imperial Beach Pier, and Dunes Park. The Imperial Beach Pier was first built in 1963.

A storm destroyed the pier and it was rebuilt in the 1980s. The Tijuana River runs through the City of Tijuana, Mexico, and drains into the Tijuana River Estuary in the U.S. and ultimately to the Pacific Ocean in the City of Imperial Beach, in PD8. Sewage infrastructure adequacies in Tijuana over the last 30 years have degraded the water quality in the Tijuana River Valley, in the estuary, and the adjacent coastal waters and beachfronts, resulting in risk to public health and the environment (RWQCB 2021).

Planning District 9: Silver Strand

Planning District 9 consists of open water, bayfront shoreline, the land mass of Crown Isle, and the land mass east of Coronado Cays, which contains commercial recreation and Grand Caribe Shoreline Park. The two land masses were built in the late 1960s to 1970s during the development of the Coronado Cays residential community. Shortly thereafter they were developed with marinas and visitor-serving commercial recreation uses. No historic uses that have led to hazardous conditions are known to be present in PD9.

Planning District 10: Coronado Bayfront

The original ferry landing ran from east Coronado bayfront to downtown San Diego from 1886 to 1969. The existing Ferry Landing Pier and the associated landside commercial recreation, retail, and restaurant development was built in 1988, and the pier just southeast of the Ferry Landing Pier was developed in 1987. The southern portion of the North Coronado Subdistrict was developed with hotel and park uses in 1987, prior to which the area was occupied by the Federal Housing Project and Glorietta School built in 1944 to house servicemen and their families. Glorietta Bay was first dredged to deepen the channel and build up the shoreline in 1888 to serve recreational boating purposes. The Coronado Municipal Golf Course was built in 1957 on previously developed shoreline along the Bay. No historic uses that have led to hazardous conditions are known present in PD10.

4.7.2.2 Known Contamination Within the Proposed PMPU Area

Several planning districts in the proposed PMPU area have contamination cases recorded within their boundaries. The specific sites with contamination are identified below based on the summary of findings from the hazardous materials technical study performed by Ninyo & Moore (2020) and other sources. The main contaminants of concern that have resulted from historic and current uses along the Bayfront include PCBs, PAHs, polychlorinated terphenyls (PCTs), metals (e.g., copper, lead, mercury, and zinc), and pesticides. Further background information on the sources of contaminants of concern, as well as human health and environmental effects of each contaminant is provided below.

Hazardous Substances and Related Health Effects

Chemicals

Polychlorinated Biphenyl (PCBs)

PCBs are organic chlorine compounds and represent a complex mixture of individual congeners that were produced in the U.S. between 1930 and 1977. Their production was banned in 1977 by the U.S. Environmental Protection Agency (EPA) because of their known environment persistence possible

harmful effects (ATSDR 2000). PCBs were produced for applications in a myriad of uses including for the electric industry as dielectric fluids in capacitors and transformers, in paints, marine finishes, surface coatings, adhesives, resins, plasticizers, hydraulic fluids, asphalt products, cutting oils, and pesticide extenders. PCBs are persistent in the environment and exist in San Diego Bay sediments and surrounding areas at levels requiring regulatory action. Because of their stability and lipophilicity, PCBs bioaccumulate through the food chain, and are stored in fatty tissues. In San Diego Bay, the concentration of PCBs in fish tissue, particularly of high trophic level species, has resulted in the publishing of fish consumption advisories for recreational fish caught in San Diego Bay.

Data from human and laboratory mammal studies provide evidence of the toxic potential of exposure to PCBs (ATSDR 2000). Dietary consumption is the major source of PCB accumulation in humans and wildlife. Epidemiological and laboratory studies indicate an association between dietary PCB exposures and both reproductive functions and developmental effects. PCBs also have the potential for toxicity from dermal and inhalation exposure. PCBs have been reported to elicit a broad range of toxic effects in laboratory mammals, including lethality, hepatotoxicity, porphyria, body weight loss, dermal toxicity, thymic atrophy, immunosuppressive effects, reproductive and developmental effects, carcinogenesis, and neurotoxicity (Safe 1991, 1992, 1994, 1984; Seegal 1996; Silberhorn et al. 1990; WHO 1993; Battershill 1994). Adverse effects on growth, reproduction, and behavior have also been observed in fish and birds exposed to PCBs (Bengtsson 1980, Fernie et al. 2001, Hansen et al. 1974, Haseltine and Prouty 1980, Hugla and Thome 1999, Peakall and Peakall 1973, Platonow and Reinhart 1973). Exposure to some PCB mixtures by workers through inhalation or dermal contact can result in respiratory tract symptoms; gastrointestinal effects; mild liver effects; and effects on the skin and eyes such as chloracne, skin rashes, and eye irritation (ATSDR 2000). EPA has classified PCBs as a Group B2, probable human carcinogen (EPA 2018).

Polycyclic Aromatic Hydrocarbons (PAHs)

PAHs are a class of hydrocarbon chemicals that have two or more fused benzene rings and occur in the environment as complex mixtures. There are more than 100 individual PAHs, which are generally grouped into two categories: low-molecular-weight PAHs (LPAHs) (compounds composed of fewer than four benzene rings) and high-molecular-weight PAHs (HPAHs) (compounds composed of four or more benzene rings). PAHs occur naturally in coal, crude oil, and refined products such as gasoline, motor oil, and lubricants. PAHs are also produced as a combustion byproduct of some materials, such as coal, oil, wood and garbage. In addition, some PAHs are manufactured; these are found in products such as plastics, creosote, and roofing tar (ATSDR 1995). PAHs are ubiquitous in the San Diego Bay environment resulting from multiple sources including fueling operations, presence of creosote-coated pilings, presence in stormwater runoff entering the Bay, and combustion of PAH-containing products in gasoline and diesel engines. In general, LPAHs have a greater tendency to volatilize and a lesser tendency to bind to organic carbon than do HPAHs, resulting in a lower persistence in the aquatic environment. HPAHs tend to be more persistent in the environment; however, bioaccumulation of PAHs by upper trophic level organisms, including fish, birds, and mammals, is limited because PAHs are metabolized and excreted by fish following uptake (Khairy et al. 2014).

PAHs are a human health and environmental concern. The focus on toxicity for PAHs is for 16 PAHs.¹ A number of studies show increased incidence of cancer (lung, skin, and urinary cancers) in humans exposed to PAH mixtures from inhalation or dermal exposure (ATSDR 1995). Many individual PAH compounds have been classified as probable or possible carcinogens by entities such as the National Toxicology Program and EPA (EPA 2018). Non-carcinogenic chronic effects of PAHs involve pulmonary, gastrointestinal, renal, and dermatologic systems in humans. The toxicity, carcinogenicity, and mutagenicity of PAHs vary with the molecular weight of the compound, the degree of alkylation, and the mode of accumulation (water, food, or sediment) by the organism (Neff 1979, Moore and Ramamoorthy 1984). LPAHs generally have significant acute toxicity, whereas HPAHs do not. However, several HPAHs are known to be carcinogenic and cause chronic toxicity. Dietary exposure of PAHs in animals has been linked to immunosuppression and reproductive effects. In fish, exposure to PAHs is known to cause narcosis (a generalized toxic effect) and developmental abnormalities in embryos (Schultz 1989). Fish exposed to PAH-contaminated sediments through direct contact have been shown to exhibit increased incidence of skin and liver lesions and other deformities (Myers et al. 1994; Pinkney et al. 2000).

Polychlorinated terphenyls (PCTs)

PCTs are similar to high chlorinated PCBs in that they are stable and bioaccumulate through food webs and are ubiquitous in the environment, including soil, sediment, and biological tissues. Toxicity of PCTs is also similar to those of PCBs; however, PCT mixtures are not. Adverse effects associated with chronic exposure to PCTs include liver damage, incidence of tumors, endocrine disruption, immunosuppression, and other reproductive effects (Jensen and Jorgensen 1983). In laboratory studies, PCT exposure was associated with reduction in growth, liver toxicity, and developmental effects (WHO 1993).

Pesticides

Pesticides are a large and diverse group of substances used to prevent, destroy, or mitigate unwanted organisms. Most pesticides can be classified as organochlorine pesticides, organophosphate pesticides, herbicides, pyrethroid pesticides, and carbamate insecticides. Many pesticides have been banned from use (e.g., dichlorodiphenyltrichloroethane [DDT]) or have restrictions placed on the use (e.g., diazinon banned for residential use); however, many pesticides are persistent in the environment, and lipophilic pesticides accumulate in the food chain. Residential use and urban runoff are likely sources of pesticides to San Diego Bay. Pesticides are commonly required for investigation in investigative orders issued in San Diego Bay. In addition, a total maximum daily load (TMDL) for diazinon was adopted by the San Diego RWQCB on August 14, 2002, to meet the toxicity water quality objective in Chollas Creek, located in PD5, to ensure that water quality with respect to diazinon supports the aquatic life beneficial uses of the creek (see Section 4.8.2 for additional details).

Human health and environmental effects from pesticides are variable and dependent upon the pesticide and exposure. Pesticides can cause both acute and chronic adverse effects. Some pesticides, such as the organophosphates and carbamates, affect the nervous system. Others may

¹ The 16 PAHs that are the focus for evaluating PAH toxicity are: 7 LPAHs (i.e., acenaphthene, acenaphthylene, anthracene, fluoranthene, fluorene, naphthalene, and phenanthrene) and 9 HPAHs (benzo(a)anthracene, benzo(a)pyrene, benzo(b/j)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and pyrene).

irritate the skin or eyes, while some pesticides may be carcinogens and others may affect the hormone or endocrine system in the body. Pesticides such as DDT and dieldrin are documented to cause eggshell thinning and have reproductive effects in avian species.

Organochlorine pesticides are a certain type of pesticide used primarily between the 1940s and 1970s for pest control for agricultural crops and around buildings (termiticides). While the use of organochlorine pesticides has been banned, legacy organochlorine pesticides can be found in surface soils and aquatic sediments. Health effects from exposure to organochlorine pesticides include neurological effects, birth defects, and cancer (DTSC 2010).

Metals

Copper

Copper is a naturally occurring and ubiquitous metal found throughout the Earth's crust. Copper can enter the environment through human activities, including mining, smelting, and releases of wastewater, and through natural sources such as volcanoes or forest fires. Copper found in the environment is usually associated with organic material or other soil/sediment components such as clay or sand. Once released into the environment, copper does not break down, meaning that once it enters the water, it builds up in the sediments of lakes and rivers; it can be found in high concentrations in animal species (ATSDR 2004). Copper is extensively mined in the United States to produce various products, including electrical wires, plumbing components, building materials (e.g., roof, gutters, and ornamental features), and alloys used in other products. Additionally, copper compounds are used in pesticides (e.g., algicides, fungicides, and bactericides), for water treatment, and as a preservative in products such as wood and fabrics (ATSDR 2004). Copper is used as an antifouling agent on a vessel's hull to prevent buildup of marine organisms but can leech into the water.

While low levels of copper are important for good health (copper is an essential element for plants and animals, including humans), high levels of copper can be harmful to health or the environment. In humans and mammals, copper is absorbed from the stomach and small intestine. In excess, copper exposure is associated with gastrointestinal distress, liver and kidney damage, anemia, and immunosuppression (ATSDR 2004). Effects of exposure to copper for laboratory mammals include decreased growth for mice and rats and reduced reproduction (reduced kit survival) for mink (NTP 1993, Aulerich et al. 1982, Dodds-Smith et al. 1992). Reduced growth and survival in fish and birds have also been reported from exposure to dietary copper (Jensen and Maurice 1978, Kang et al. 2005, Lanno et al. 1985, Mehring et al. 1960, Mount et al. 1994, Poupoulis and Jensen 1976, Smith 1969).

Mercury

Mercury is a naturally occurring metal that is present in various forms, including elemental mercury, inorganic mercury (primarily as mercuric salts), and organic mercury (primarily methylmercury). Elemental and inorganic mercury can enter the environment as byproducts of industrial and commercial operations (e.g., mining, emissions from coal-fired power plants, and incineration of waste containing mercury), as well as through natural processes (e.g., weathering of rocks that contain mercury). In addition, before the 1970s (i.e., when the health effects of methylmercury were unknown), methylmercury was used as a fungicide to protect seed grain (ATSDR 1999). Recycling of mercury in the environment often involves elemental mercury volatilizing from surface soils and waters, followed by atmospheric transport and deposition back to surface soils and waters. Mercury

can also be associated with air particulates, but it is unlikely to be transported long distances (ATSDR 1999). Mercury can be transformed into methylmercury by microorganisms in soil, sediment, and water. Methylmercury is important with regard to human and ecological risks because it is soluble and mobile, and rapidly bioaccumulates in aquatic organisms and concentrates in the tissues of carnivorous fish and other organisms. It is also known to be more toxic and bioaccumulative than elemental and inorganic mercury (ATSDR 1999, EPA 2015). In San Diego Bay, fish concentrations of mercury that are suspected largely from historical sources have resulted in baywide fish consumption advisories.

Mercury exposure is associated with a number of toxic effects on humans and wildlife, including adverse effects on the kidneys and nervous system, growth, reproduction, blood and serum chemistry, motor coordination, vision, hearing, histology, metabolism, and survival, and can have teratogenic effects (Eisler 1987, ORNL 1998). EPA has identified mercury chloride and methylmercury as possible human carcinogens. Adverse effects on growth, reproduction, and survival have been observed in mink after dietary mercury exposure from fish consumption (Wobeser et al. 1976a, 1976b; Aulerich et al. 1974; Dansereau et al. 1999). Changes in behavior of fish and avian species (i.e., predator avoidance, motor coordination) have also been observed in laboratory studies following exposure to mercury (Bouton et al. 1999, Heinz 1975, Kania and O'Hara 1974, Kreitzer and Heinz 1974, Matta et al. 2001; Webber and Haines 2003); the significance of these behavior alternations on ecological populations in the wild are unknown.

Zinc

Zinc is a naturally occurring metal found in the Earth's crust. Zinc compounds are widely used in industry for uses such as white paints, ceramics, rubber production, wood preservative, and fabric dyeing and manufacturing, as well as for drug production (ATSDR 2005). Sources of zinc in the environment come from mining, ore purification, steel production, coal burning, and waste burning (ATSDR 2005). In addition, zinc has been used as an antifoulant and anticorrosive paint coating for boats, in the aerospace and automotive industries, and by the military. The use of San Diego Bay for recreational marinas and boating, shipyards, airplane manufacturing, and other defense-based support industries are likely sources of zinc in the Bay. Furthermore, tires and outdoor galvanized materials have been found as common sources of zinc in urban runoff in California (TDC Environmental 2015), including in the Chollas Creek Watershed (Weston Solutions 2011).

Zinc is an essential trace element; while low levels of zinc are important for good health, high levels can be harmful to health or the environment. Toxicity studies have shown adverse effects from ingestion of zinc by laboratory mammals including anemia, pancreatic and kidney impairment, and reproductive effects, including infertility (ATSDR 2005). Exposure to dietary zinc has been associated with adverse effects on growth in fish and wildlife, and reproductive parameters in mammals (Persia et al. 2004, Roberson and Schaible 1960, Schlicker and Cox 1968, Sutton and Nelson 1937, Straube et al. 1980, Takeda and Shimma 1977). Toxicity values are generally affected by the age and nutrient status of the organism, changes in the physicochemical regimen, and interactions with other chemicals, especially copper salts.

Lead

Lead is a naturally occurring metal found in the Earth's crust. Lead can be found throughout the environment, largely as a result of anthropogenic activities such as mining, burning of fossil fuels, and various manufacturing processes. Lead is currently mined in the United States for use in

products such as pipes, batteries, and ammunition. The use of lead in other products (e.g., caulking materials and pigments for paints and ceramic glazes) has been greatly reduced due to health concerns associated with exposure to lead. Historically, lead has been used in pesticides in fruit orchards (starting in the early 1900s) and as an additive to gasoline (between 1950 and 2000) to increase engine efficiency; both of these uses occurred worldwide (ATSDR 2020). Once lead enters the environment, its particulates in the air are subject to atmospheric transport and deposition, allowing lead to enter sediment, soil, or surface water. Lead strongly sorbs to soil and sediment and generally will not leach into subsurface soil and groundwater. Lead in surface water exists primarily in an undissolved phase (i.e., as lead carbonate, lead oxide, and lead hydroxide) (ATSDR 2007).

Studies have shown adverse effects with lead exposure and neurological, renal, cardiovascular, hematological, immunological, reproductive, and developmental effects; there is a particular concern with lead exposure and the neurological effects in infants and children (ATSDR 2020). The exposure of mammals to high concentrations of lead in the diet has been reported to cause anemia, weight loss, muscle atrophy, paralysis, brain damage, mortality, and reproductive effects (Eisler 1988) and reductions in growth and survival for both fish and birds (Mount et al. 1994, Kendall and Scanlon 1982, Hoffman et al. 1985, Pattee 1984, Edens et al. 1976). Sublethal concentrations of lead can accumulate in blood and tissues, and higher-trophic-level organisms may experience adverse effects as a result of consuming prey with accumulated lead concentrations.

Hazardous Substance-Related Regulatory Actions

Planning District 1: Shelter Island

From 1979 to 1985, the RWQCB issued Waste Discharge Requirements (WDRs) to various ship repair facilities adjacent to America's Cup Harbor located in the East Shelter Island Subdistrict, prohibiting the discharge of waste to the Bay. Due to violations of the WDRs and the potential for runoff or direct discharges from the historic industrial use around America's Cup Harbor, the RWQCB issued Cleanup and Abatement Orders (CAOs) to investigate and remediate contaminated sediments within the harbor. In 1988 and 1989, the RWQCB issued CAOs 88-70, 88-78, 88-79, 88-86, 89-18, and 89-32 to seven boatyards related to contaminants of concern including copper, mercury, and tributyltin (TBT). Dredging was subsequently performed to remediate the impacted sediments (Kleinfelder 2019).

From 2008 to 2018, the Regional Harbor Monitoring Program (RHMP) and the Southern California Coastal Water Research Project (SCCWRP) found elevated levels of PCBs in America's Cup Harbor sediments and fish tissues (SCCWRP 2020).

Releases of petroleum products to land or directly to the Bay from underground storage tanks (USTs) and surface spills have been reported for various facilities adjacent to America's Cup Harbor. These reported releases include petroleum releases to land during UST removal in 1984 from Standard Oil Marina, in 1990 at Kettenburg Marine, in 1991 at Driscoll, Inc., and in 1994 at the Harbor Boat and Yacht Company fuel dock. Additionally, releases of petroleum products directly to the Bay were reported at Bay City Marine Inc. (approximately 50 to 100 gallons of diesel fuel and orange fluorescent material in 1994 and 1995), Sun Harbor Marina (gasoline and diesel fuel from various incidents from 2006 to 2017), and Eichenlaub Yacht & Marine (diesel fuel in 1999) (Kleinfelder 2019).

Comparatively, the West Shelter Island Subdistrict had fewer issues. Elevated levels of dissolved copper have been found within the Shelter Island Yacht Basin due to the use of anti-fouling paints containing copper on marine vessels. In February 2005, the RWQCB adopted a TMDL for dissolved copper within the Shelter Island Yacht Basin. On June 11, 2008, the San Diego RWQCB adopted a TMDL for indicator bacteria (fecal bacteria that serve as indicators of human pathogens) for the Shelter Island Shoreline Park. (See Section 4.8 for additional details on the existing TMDLs.)

Planning District 2: Harbor Island

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) issued an Imminent or Substantial Endangerment Determination and Remedial Action Order (IS&E Order) to the District, General Dynamics Corporation, and Lockheed Martin Corporation in 1998 related to PCBs in the Tow Basin. The District, General Dynamics Corporation, and Lockheed Martin Corporation were ordered to develop and implement a site remediation strategy, in conformance with the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) to address PCBs and other pollutants found at the Tow Basin Site. The site investigation and soil, groundwater, and hazardous materials remediation activities were completed and the site transferred to the RWQCB in 2009 to oversee the remaining sediment cleanup in the East Basin.

RWQCB Investigative Order R9-2011-0064, issued to the District in 2011, found that copper and zinc reported in sediment samples were the result of discharges from boats moored within the East Basin (Sunroad Resort Marina). At the same time RWQCB IO R9-2011-0026 was issued to Lockheed for unauthorized discharge of mercury to the East Basin from the Marine Terminal and Railway facility. Investigation and remedial activities are ongoing.

In 1986, the RWQCB issued Cleanup and Abatement Order No. 86-92 at the Teledyne Ryan Aeronautical site near Lindbergh Field, San Diego County. This order found that, at a minimum, PCB-impacted sediment in SWCSs site has contributed to the elevated PCB concentrations found in Convair Lagoon sediment and would continue to be a discharge source during future rainfall events. The order directed: (1) the submittal of reports of historic storm drain cleaning activities, (2) removal of sediment and waste from sump and storm drain lines, and (3) implementation of best management practices to prevent future discharges to the SWCSs.

Pursuant to Order 86-92 and addenda, between 1986 and 1998, actions were taken to: (1) remove PCB-containing equipment from the site, (2) remove and clean PCB-impacted sediment from the onsite SWCSs, (3) replace portions of the SWCS system, and (4) install an engineered sand cap in Convair Lagoon to isolate the sediment-containing PCBs from the environment. In 1998, the RWQCB issued Order No. 98-21 containing the Waste Discharge Requirements (WDRs) and the Monitoring and Reporting Program for Closure and Post-Closure Maintenance of the Convair Lagoon sediment cap (CRWQCB 1998).

Sampling of the SWCS sediments performed between 1999 and 2003 found continued elevated concentrations of PCBs in the SWCS sediments (CRWQCB 2004). RWQCB Cleanup and Abatement Order No. R9-2004-0258 was issued to conduct additional site characterization activities to identify the sources of PCB and other chemicals of concern, implement interim remedial actions, conduct a remedial investigation/feasibility study, and implement remedial actions. PCB sources included building materials (i.e., paint, joint compound, concrete slabs, and foundations) and surrounding soils, SWCS sediment, localized areas of impacted soil, and groundwater.

SWCS sampling between 2007 and 2012, as part of the RWQCB Order 98-21 (Waste Discharger Requirements for Teledyne Ryan Aeronautical, Closure and Post Closure Maintenance of the Convair Lagoon Sand Cap, San Diego Bay), reported decreasing concentrations of PCBs in sediments at the outfalls (Geosyntec 2007). In 2015, the RWQCB issued Order R9-2015-0029 containing WDRs for the Convair Lagoon sand cap superseding Order 98-21. Order R9-2015-0029 reduced the monitoring requirements to visual inspections and sampling and analysis of the sand cap. Monitoring of sediments at the SWCS outfalls was eliminated.

Surface samples collected from the sand cap cores in 2013 and 2018 contained elevated concentrations of PCBs.

Planning District 3: Embarcadero

In 2014, the RWQCB issued Investigative Order No. R9-2014-0007 directing General Dynamics, the SDCRAA, and the District to submit technical reports pertaining to an investigation of sediment chemistry in the Laurel Hawthorn Central Embayment (LHCE) in San Diego Bay. Chemicals of concern included metals, PCBs, PAHs, and pesticides. A sediment investigation conducted within the LHCE during early 2015 found elevated concentrations of metals (copper, lead, mercury and zinc), chlorinated pesticides, and PCBs in the LHCE sediments.

In October 2019, the RWQCB issued Investigative Orders No. R9-2019-0039, R9-2019-0040, R9-2019-0041 to Solar Turbines, Inc. and Navistar, Inc., the City of San Diego, and General Dynamics, respectively. These orders directed Solar/Navistar, the City of San Diego and General Dynamics to conduct sediment investigations within the LHCE to assess the nature and extent of sediment impacts resulting from discharges from their respective facilities. Target chemicals for these investigations include metals, semi-volatile organic compounds (SVOCs), PAHs, pesticides, and PCBs. These investigations are underway.

In 1985, the RWQCB issued Order No. 85-01, Waste Discharge Requirements for Campbell Industries, San Diego, California. This order, and associated addenda, required the collection and analysis of sediments from 11 stations along the Campbell shoreline, four stations at SWCS outfalls discharging to the Bay at the Campbell site, and three remote reference stations. The suite of required analyses included several chemicals of concern, such as metals, hydrocarbons, PCBs, and PCTs. Elevated concentrations of PCBs and PCTs were reported in the Bay sediments from these sampling events.

In 1995, the RWQCB issued Cleanup and Abatement Order No. 95-21 for Campbell Industries, Marine Construction and Design Company. This order concluded, among other things, that concentrations of PCBs in sediment along the Campbell shoreline were above the background levels and that the contaminated sediment had caused or threatened to cause a condition of pollution. Order 95-21 required best management practices to be implemented to the satisfaction of the RWQCB, the cleanup of sediment contaminated with PCBs and other chemicals, and the cleanup of upland soil and groundwater. The order was amended (Revised Amendment No. 3) and replaced the District as a responsible party.

In 2005, the RWQCB issued Order No. R9-2004-0295, Waste Discharge Requirements for the Port of San Diego Campbell Shipyard Bay Sediment Cap, Closure and Post Closure Maintenance, San Diego Bay and associated Monitoring and Reporting Program No. R9-2004-0295. This order included the requirements for dredging contaminated sediment from the Bay and placement of an engineered cap to isolate remaining contaminants. The Monitoring and Reporting Program established the

requirement for monitoring and reporting during the implementation of the remedial action and the long-term monitoring requirement after completion (CRWQCB 2004).

The sediment dredging and engineered cap construction were completed in 2008. The cap included a 5-foot-thick isolation cap with a 1.6-acre habitat cap to support eelgrass. Pursuant to the requirements of the long-term monitoring program, samples of sediment accumulated on the engineer cap since its completion have been collected and were found to have elevated concentrations of metals, polynuclear PAHs, and PCBs.

Planning District 4: Working Waterfront

In March 2012, the RWQCB issued Cleanup and Abatement Order No. R9-2012-0024 (2012 Order) within PD4 for the Shipyard Sediment Site, encompassing NASSCO, the BAE Systems San Diego Ship Repair Facility (BAE Systems), the City of San Diego, San Diego Marine Construction Company, 1 Campbell Industries (Campbell), San Diego Gas and Electric (SDG&E), the United States Navy, and the District areas. The order required the following actions: (1) terminate illicit discharges, (2) prepare and implement a remedial action plan to remediate the contaminated marine sediment; (3) implement interim measures to correct and abate discharges from the contributing municipal separate storm sewer (MS4) systems, and (4) prepare and implement an investigation of the nearby MS4 and Mitigation Plan. The chemicals of concern included metals (copper, zinc, mercury, and others), PAHs, PCBs, and tributyltin. The remedial actions included dredging and capping completed in 2016 (Anchor QEA 2016), and the subject site is currently under post-remedial monitoring.

In August 2017, the RWQCB issued Investigative Order R9-2017-0081 that directed the performance of a sediment chemistry assessment in the Bay and upland areas around the Tenth Avenue Marine Terminal (TAMT IO). Chemicals of concern included PCBs, PAHs, PCTs metals and pesticides. Bay sediment and upland investigations were performed between 2017 and 2019, and the Sediment Chemistry Assessment Report was submitted in March 2020. Further actions are ongoing.

In August 2017, the RWQCB issued Investigative Order R9-2017-0082, requiring the performance of a sediment chemistry assessment in the Bay and upland areas around the Continental Maritime ship repair facility (Continental Maritime Shipyard IO). Chemicals of concern included PCBs, PAHs, PCTs, metals, and pesticides. Bay sediment and upland investigations were performed between 2017 and 2019, and an initial Sediment Chemistry Assessment Report was submitted in February 2020 (Wood 2020). Additional sediment investigation was performed as part of wharf maintenance activities in September 2020, and a supplemental investigation report was submitted in February 2021 (Anchor QEA 2021). Further actions are ongoing.

In August 2017, the RWQCB issued Investigative Order R9-2017-0083, directing a sediment chemistry assessment in the Bay and upland areas around the Continental Maritime ship repair facility (BAE-SDG&E IO). Chemicals of concern included PCBs, PAHs, PCTs, metals, and pesticides. An initial Sediment and Analysis Report was submitted in August 2019, with both report revisions and ongoing actions continuing.

Planning District 7: South Bay

There are no hazardous substance-related regulatory actions that have taken place within PD7.

Planning District 8: Imperial Beach Oceanfront

There are no hazardous substance-related regulatory actions that have taken place within PD8. For decades, the release of untreated or partially treated sewage and other hazardous substances from infrastructure inadequacies in the Tijuana River Watershed has created recurring sewage and other pollution problems on both sides of the California/Mexico border and specifically within PD8, which is located north of the estuary where the Tijuana River meets the Pacific Ocean. Recent events related to sewage releases in the Tijuana River Watershed are described below:

- In February 2017 untreated sewage was released into the Tijuana River Valley via the main channel of the river.
- On March 2, 2017, the San Diego Water Board's Executive Officer sent a letter to the U.S. and Mexican International Boundary and Water Commission (IBWC) in response to the large cross-border release of untreated sewage in February 2017. The letter included recommendations with respect to improved communication, infrastructure, and water quality monitoring.
- On April 3, 2017, the IBWC released an investigative report entitled *Report of Transboundary Bypass Flows into the Tijuana River*, which was produced in response to the February 2017 incident. It was determined that 28 million gallons of untreated sewage were discharged into the Tijuana River from February 6 through 23, 2017, while the Tijuana municipal utilities department (Comisión Estatal de Servicios Públicos de Tijuana, CESPT) made repairs to the sewage collection system in central Tijuana.
- On May 14, 2018, the San Diego RWQCB and the California Attorney General, on behalf of the people of California, filed a Notice of Intent to Sue the U.S. Section of the IBWC for violations of the Clean Water Act related to transboundary discharges of waste.
- On February 5, 2020, the San Diego RWQCB issued Investigative Order No. R9-2020-0030, which requires the U.S. Section of the IBWC to submit technical reports pertaining to the investigation of pollution, contamination, and nuisance from transboundary flows in the Tijuana River Valley.
- On May 12, 2021, the San Diego RWQCB adopted Tentative Order No. R9-2021-0001, reissuing Waste Discharge Requirements for the United States Section of the International Boundary and Water Commission, South Bay International Wastewater Treatment Plant, Discharge to the Pacific Ocean through the South Bay Ocean Outfall, San Diego County (NPDES No. CA0108928).
- On May 12, 2021, the San Diego RWQCB also adopted the revised Tentative Cease and Desist Order (CDO) for the United States Section of the International Boundary and Water Commission (USIBWC) South Bay International Wastewater Treatment Plant (SBIWTP) discharge to the Pacific Ocean through the South Bay Ocean Outfall (Tentative CDO No. R9-2021-0107). The Tentative CDO addresses discharges from the South Bay International Wastewater Treatment Plant that are taking place in violation of the requirements of Order No. R9-2014-0009 and threatening to take place in violation of the requirements of Tentative Order No. R9-2021-001.

Planning District 9: Silver Strand

No hazardous-substance-related regulatory actions have taken place within PD9. However, outside the proposed PMPU boundaries, Military cleanup sites are located north and south of PD9 along the Silver Strand.

Planning District 10: Coronado Bayfront

No hazardous-substance-related regulatory actions have taken place within PD10. However, Military cleanup sites are located to the southeast and west of PD10 in Coronado and along the Silver Strand due to the extensive use of the area for military purposes from as early as 1917. The Coronado Naval Amphibious Base is a Navy facility southwest of Glorietta Bay on the Silver Strand peninsula that has undergone and continues to undergo investigation and remediation for contaminants of concern including petroleum, metals, UXOs, PCBs, and VOCs. The Naval Air Station North Island is a Navy Facility northwest of PD7 occupying the northern half of the island of Coronado. The Naval Air Station North Island has 140 solid waste management units and 3 areas of concern under DTSC oversight for contaminants of concern including petroleum products, solvents, metals, PCBs, PAHs, chlorinated hydrocarbons.

Hazardous Materials Database Search Results

The hazardous materials technical study (HMTS) prepared for the proposed PMPU provided a review of the environmental database search conducted by Environmental Database Resource, Inc. (EDR). The environmental database search provided by EDR included Federal, State, and local environmental databases that identify and track sites that contain, or have released, hazardous materials to the soil and/or groundwater. The HMTS also reviewed the State Water Resources Control Board (SWRCB) GeoTracker database and the California DTSC Envirostor database for supplemental information. The environmental database search encompassed a 1/16-mile radius from each PMPU planning district boundary to identify unauthorized releases to soil, groundwater, and/or sediment on or in the immediate vicinity of each planning district. The 1/16-mile radius was selected for this program-level analysis to evaluate offsite properties with the greatest potential to adversely impact the planning districts. Industry standards recommend open cases or documented contamination plumes within 300 feet of a project site are the cases that have the greatest potential to adversely impact a site via groundwater. A large release could occur over 300 feet from the future development project site, but the documented contamination plume could migrate to within 300 feet of the site, and adversely impact groundwater at the site. Additionally, standard industry practice for cases involving soil vapor uses a vapor encroachment screening matrix search distance test that specifies a distance of 30 feet from the edge of a petroleum plume and 100 feet from the edge of a chlorinated hydrocarbon plume. Both of these release types would be covered using the 300-foot distance for open cases and 150-foot for closed cases.

The databases searched are listed in the HMTS (Appendix G). Cases of unauthorized release that have been “closed” by the responsible agency indicate that the contamination was remediated to a level at or below the applicable local, State, and Federal standards or has been safely and securely isolated and encapsulated. An “open” status indicates a release of a hazardous material occurred on site, is possibly undergoing remediation, and has not yet been closed by the responsible agency. In some instances, the EDR search results contain multiple listings on different databases for the same site. The results of the EDR database search are provided below for each planning district and depicted on Figure 4.7-1 with the corresponding Map ID number. The findings of the HMTS represent the most current database listings at the time of the report, but the databases are continuously updated. Thus, based on the planning horizon, the database searches may need to be updated for reasonably foreseeable future projects.

Planning District 1: Shelter Island

The environmental database search conducted for PD1 identified 15 sites, 2 of which had an “open” status, the rest of which are closed (see Figure 4.7-1). The open cases are described below.

- The site with the Map ID 113a has one opened leaking underground storage tank (LUST) case. The site is reportedly undergoing investigation and quarterly groundwater monitoring.
- Map ID 128 is an open case listed on the EnviroStor database. It is in the eastern portion of PD1, offshore of the Shelter Island peninsula. This facility is a Formerly Used Defense Sites (FUDS) facility, and the case is listed as *inactive*²; however, the database indicates the site “needs evaluation.”

Planning District 2: Harbor Island

Based on the HMTS, PD2 has 42 unauthorized release sites on or adjacent to it, based on the environmental database review (see Figure 4.7-2). Fifteen of these sites have an open status and are described below.

- Map ID 7b is a FUDS facility listed as Consolidated Aircraft Main Plant and did not have an address. The case is listed as *inactive*. According to the database, evaluation is needed. No other information is available on the database.
- Map ID 12a is located at Northside San Diego International Airport Redevelopment, 3302 Pacific Highway. The case is under the oversight of the RWQCB and was opened in September 2010. The case is listed on the Spills, Leaks, Investigation and Cleanup (SLIC) database and is related to a release of PCBs and chromium affecting soil, indoor air, soil vapor, groundwater, and surface water. The property is under ongoing investigation as part of redevelopment efforts by the San Diego County Regional Airport Authority.
- Map ID 23f is located at Ryan Aircraft facility, which did not list an address. The case is listed on the EnviroStor database as a FUDS facility. The case is listed as *inactive*. According to the database, *evaluation is needed*, indicating further actions must be taken before the listing can be closed (see description for the sites listed in PD1). No other information related to the site was provided in the database results.
- Map ID 25a is located at the Camp Consair facility and has no address. The facility is listed as a FUDS facility on the EnviroStor database. The case is listed as *inactive*. According to the database, *evaluation is needed*, indicating further actions must be taken before the listing can be closed. No other information related to the site was provided in the database results.
- Map ID 25b is located at the San Diego International Airport and has no address. It should be noted that the database results list the site as San Diego Municipal Airport. The facility is listed as a FUDS facility on the EnviroStor database. The case is listed as *inactive*. According to the database, *evaluation is needed*, indicating further actions must be taken before the listing can be closed. No other information related to the site was provided in the database results.
- Map ID 31 is located at the non-addressed Searchlight Battery #35 property. The facility is listed as a FUDS facility on the EnviroStor database. The case is listed as *inactive*. According to the

² According to the DTSC Envirostor database, sites with an “inactive – needs evaluation” designation are non-active sites where the DTSC has determined a preliminary endangerment assessment (PEA) or other evaluation is required.

database, *evaluation is needed*, indicating further actions must be taken before the listing can be closed. No other information related to the site was provided in the database results.

- Map ID 35b is identified as Lindbergh Field Shell underground storage tank (UST), located at 2400 Stillwater Road. The facility is listed on the SLIC database for a release of aviation fuel and gasoline that affected soil and groundwater. The cases were closed between 1987 and 2002. The facility is an active, class C, industrial waste site.
- Map ID 38 is identified as San Diego City Sewer Pump Station, located at 4077 North Harbor Drive. The facility is listed on the EnviroStor database, and is listed as a tiered permit and as of September 2000 was applying to the Certified Unified Program Agency (CUPA) for a permit to treat corrosive wastewaters. The facility is listed as *inactive*. According to the database, *evaluation is needed*, indicating further actions must be taken before the listing can be closed. No other information is provided in the database results.
- Map ID 42a is Avis Rent-a-Car, located at 3875 North Harbor Drive. There are three closed unauthorized release cases related to gasoline releases affecting soil and groundwater. Residual petroleum-related contamination remains in soil and groundwater. One open case is for a release of petroleum hydrocarbons that impacted soil and groundwater. Impacted soil and groundwater remain at the facility.
- Map IDs 47 and 64 are both associated with the former Tow Basin Facility located adjacently north of the East Basin. The site is listed on both the SLIC and EnviroStor databases. Multiple SLIC cases were closed between 1999 and 2005. All landside assessment and remediation activities are complete. One case remains open and is associated with a release of contaminants into sediments and surface water. Due to ongoing remediation in the East Basin associated with other historical uses (Map ID 66 Lockheed Martin Systems), the sediment remediation related to Tow Basin has been incorporated into the Cleanup and Abatement Order for East Basin that was issued to Lockheed Martin in 2017 (CAO R9-2017-0021). All further documentation of the Tow Basin Facility is associated with the Lockheed Marine Railway (GeoTracker case Tow Basin - East Harbor Basin Sediment Assessment; see following bullet for additional details). Lockheed Martin's feasibility study was approved by the San Diego RWQCB in September 2020.
- Map ID 66 is the Lockheed Martin Systems (East Harbor Basin Sediment Assessment/Cleanup), located at 1160 Harbor Island Drive. The site is listed on the SLIC database, and is related to the presence of mercury and other contaminants in Bay sediments. An Investigative Order was issued in June 2011. A Cleanup and Abatement Order for divalent metals, mercury, and PCBs was issued to Lockheed Martin in 2017 for Tow Basin and the Former Marine Terminal and Railway Facilities. Lockheed Martin's feasibility study was approved by the San Diego RWQCB in September 2020.
- Map ID 54 is the UOP Inc. – Fluid Division facility, located at 2980 North Harbor Drive. The site is listed on the EnviroStor database. The case is under corrective action with a status of *inactive*; according to the database *evaluation is needed*, as of December 2010, indicating further actions must be taken before the listing can be closed. A preliminary assessment was conducted in September 1991.
- Map ID 62 is the TDY Convair Lagoon, located west of the U.S. Coast Guard Station. The site is listed on the Land Disposal Sites (LDS) database. In 1986 an investigation of PCBs was performed in the Convair Lagoon portion of San Diego Bay. Several Cleanup and Abatement Orders were issued for bay sediments. The case status is *open – closed with monitoring*. The site

was capped in 1998, and the cap is currently maintained and monitored in compliance with waste discharge requirements.

- Map ID 73 is at the U.S. Coast Guard Base and has no address. The facility is listed on the EnviroStor database as a FUDS facility. The FUDS case is listed as *inactive*. According to the database, *evaluation is needed*, indicating further actions must be taken before the listing can be closed. No other information related to the suspected contaminant or release is provided in the database results.
- Map ID 74 is the Harbor Island – East Basin Sediment Assessment (Sunroad Resort Marina), located at 955 Harbor Island Drive. The case is listed on the SLIC database and is related to a copper and zinc discharge to bay sediments. A Sediment Investigation Report was submitted to the San Diego RWQCB in 2012.

Planning District 3: Embarcadero

Planning District 3 has 44 unauthorized release sites on or adjacent to it, based on the environmental database review (see Figure 4.7-3). Thirteen of these sites have an open status and are described below.

- Map ID 58a is the Solar Turbines facility located at 2200 Pacific Highway. The site is listed on the LUST, aboveground storage tank (AST), EnviroStor, and SLIC databases. The cases were opened in September 1986 and June 1998. Contaminants of concern include metals, VOCs, PCBs, PAHs, and total petroleum hydrocarbons (TPH), which have impacted soil, soil vapor, groundwater, and bay sediments. The facility is currently undergoing remediation and further evaluation.
- Map ID 59 is the non-addressed Solar Aircraft Group facility. The facility is listed on the EnviroStor database as a FUDS facility and the case is listed as *inactive*. According to the database, *evaluation is needed*, indicating further actions must be taken before the listing can be closed. No other information related to the suspected contaminant or release is provided in the database results.
- Map ID 70 is the Laurel to Hawthorne Street Bay Sediment (Laurel Hawthorne Embayment [LHE]) site and is currently the focus of three separate IOs for sediments within the embayment. Sediments are being analyzed for a wide class of contaminants, including SVOCs, PCBs, metals, PAHs, and pesticides. Along with sediment chemistry, sediment quality will be evaluated for the protection of beneficial uses, including potential impacts on the aquatic food chain (benthic community) and potential contributions to fish consumption advisories. The case is listed on the SLIC database and is related to a release of PCBs, metals, waste oil, and PAHs affecting sediments and surface water. The case was opened in January 2012. An investigation is ongoing.
- Map ID 77 is the San Diego Barracks site and has no address. The facility is listed on the EnviroStor database as a FUDS facility. The site is listed as *inactive*. According to the database, *evaluation is needed*, indicating further actions must be taken before the listing can be closed. No other information related to the suspected contaminant or release is provided in the database results.
- Map ID 81f is the Wood Atla Pacific LLC, located at 1919 Pacific Highway. The site is listed on the SLIC database. The case was opened in September 2016 for regulatory oversight during redevelopment activities at the facility.

- Map ID 110c is the AST Flooring Company, located at 808 West Cedar Street. The site is listed on the SLIC and Superfund Enterprise Management System (SEMS)-Archive databases; however, details were not available for the facility in the database results.
- Map ID 110d is the Cedar-Cal facility located at 1560 California Street. The site is listed on the SLIC database, and the case has been open since August 2014 for regulatory oversight during redevelopment activities at the facility. Although the case is listed as *open*, there has been no activity since 2014.
- Map ID 134a is the Point Loma Naval Complex/Manchester North Gateway Project, located at 937 North Harbor Drive. The site is listed on the EnviroStor and SLIC databases. The facility is an open military base. Potential contaminants of concern include metals, waste oil, solvents, and hydrocarbons. This Voluntary Assistance Program (VAP) case was opened in January 2016 and is under investigation.
- Map ID 134b is the 11th Naval District Headquarters, which is listed on the EnviroStor database and has no address. The facility is a FUDS facility and the case is listed as *inactive*. According to the database, *evaluation is needed*, indicating further actions must be taken before the listing can be closed. No other information related to the suspected contaminant or release is provided in the database results.
- Map ID 134c is the site of the North Embarcadero Visionary Plan project, located at North Harbor Drive. The site is listed on the SLIC database. This VAP case was opened in September 2011 for regulatory oversight during redevelopment. No other information related to the suspected contaminant or release is provided in the database results.
- Map ID 167b is the San Diego Convention Center (Tidelands Dump), located at 100 Harbor Drive. The site is listed on the SLIC database. The case has been open since June 2000 and is related to a release of metals, dioxins, and PAHs that impacted soil and groundwater.
- Map ID 171 is the San Diego Marriott Hotel and Marina facility, located at 333 West Harbor Drive. The site is listed on the LUST and SLIC databases. The LUST case was opened in 1997 after damage to a UST resulted in a release of TPH-gasoline and TPH-diesel that impacted soil only and was closed in October 1999. The *open unauthorized* case was opened in May 2016 and is related to a release of metals that impacted sediments and surface water. The facility is under investigation.
- Map ID 193 is located at the Campbell Shipyard Bay Sediment San Diego Bay and has no address. The site is listed on the LDS database. The LDS case was opened in November 2006 and the status is *open – closed with monitoring* and is related to a release of solvents, PCBs, and metals that impacted sediments and surface water. The in-water remedy included a combination of removal of contaminated sediment through dredging and placement of an engineered cap.

Planning District 4: Working Waterfront

PD4 has 26 unauthorized release sites on or adjacent to it, based on the environmental database review (see Figure 4.7-4). Eight of these sites have an open status.

- Map ID 192 is located at the Mouth of Switzer Creek, along Water Street. The site is listed on the SLIC database, and the SLIC case was opened in May 2016 for a release of PCBs, metals, and PAHs that impacted sediments and surface water. The site is under investigation.

- Map IDs 203b and 204 are located at the Santa Fe Railway (Burlington Northern Santa Fe Rail), located at 1342 Crosby Street. The site is listed on the LUST database. A release of gasoline-impacted soil and groundwater was reported at the facility. The cases were closed in June 2008 and January 2015, respectively.
- Map ID203d is the Port of San Diego facility (Cesar Chavez Park) located at 1875 Water Street. The site is listed on the LUST and SLIC databases. The LUST case was opened in January 1994 for a diesel release that impacted soil and groundwater and was closed in December 1996. The SLIC case was opened in July 2015 and is related to a release of gasoline and oil that impacted soil. The facility is under investigation.
- Map ID 204b is the Pacific Maritime Fright Inc. and Tenth Avenue Marine Terminal facility. The site is listed on the SLIC database. The SLIC case is related to a release of PCBs and metals that impacted soil and surface water. The case was opened in May 2016 and is under investigation.
- Map ID 212a is the Continental Maritime San Diego City of San Diego Pipeline, located at 1995 Bayfront Street. The site is listed on the LUST, SEMS-Archive, SLIC, and EnviroStor databases. The LUST cases are related to releases of diesel and gasoline that impacted soil and groundwater. The cases were closed between 1989 and 2013. The SLIC case was opened in January 1995 and is related to oil and metals releases that impacted soil only. The facility is currently under further evaluation.
- Map ID 212b is the CP Kelco (Harbor Boat and Tug) site, located at 2145 Belt Street. The site is listed on the LUST, SLIC, and EnviroStor databases. The LUST cases are related to releases of alcohol, diesel, hydraulic fluid, and oil that impacted soil only. The cases were closed between 1988 and 2004. The SLIC case was opened in March 2004 and is related to a diesel release that impacted soil only. The facility is under investigation.
- Map IDs 213a and 223 are located at the Shipyard Sediment Site, North Shipyard, BAE Systems, at 2205 East Belt Street. The site is listed on the LUST and SLIC databases. The closed LUST case was opened in 1997 and is related to a diesel release that impacted soil only. The case was closed in July 1998. The SLIC cases were opened in 1995 and 2009 and are related to releases of PCBs, metals, and PAHs that impacted soil and groundwater. The facility is under a Cleanup and Abatement Order (CAO). The remedy defined under the CAO was constructed in 2016, and the site is currently under a long-term monitoring program.
- Map IDs 213b and 215 are located at the Chevron USA Inc. facility, located at 2351 East Harbor Drive. The site is listed on the LUST database. The offsite LUST cases were opened in 1987 during a UST removal and are related to releases of petroleum that impacted soil and groundwater. The case is still open and was transferred to the RWQCB in 2019.

Planning District 7: South Bay

Based on the environmental database review, two unauthorized release sites are located approximately 1 mile from the boundaries of PD7 near Pond 20, which is not included in the proposed PMPU. Neither of the two sites have an open status (see Figure 4.7-5).

Planning District 8: Imperial Beach Oceanfront

Planning District 8 did not have any unauthorized release sites on or adjacent to it, based on the environmental database review (see Figure 4.7-6).

Planning District 9: Silver Strand

Planning District 9 has two unauthorized release sites on or adjacent to it, based on the environmental database review. Neither of these two sites have an open status (see Figure 4.7-7).

Planning District 10: Coronado Bayfront

Planning District 10 has six unauthorized release sites on or adjacent to it, based on the environmental database review. None of these sites have an open status (see Figure 4.7-8).

Existing Schools Within 0.25 Mile of the Proposed PMPU Area

There are no schools located within the proposed PMPU boundaries; however, there are four within 0.25 mile of the proposed PMPU area. Table 4.7-2 lists the school districts and schools within 0.25 mile of the planning districts.

Table 4.7-2. Schools in the Vicinity of the Planning Districts

School District	Schools	Distance to Planning District(s)
San Diego Unified School District	Cabrillo Elementary School	0.14 mile northwest of PD1
	Perkins Elementary School	0.22 mile northeast PD4
San Diego County Office of Education	Monarch School (Special Education)	0.07 mile east of PD4

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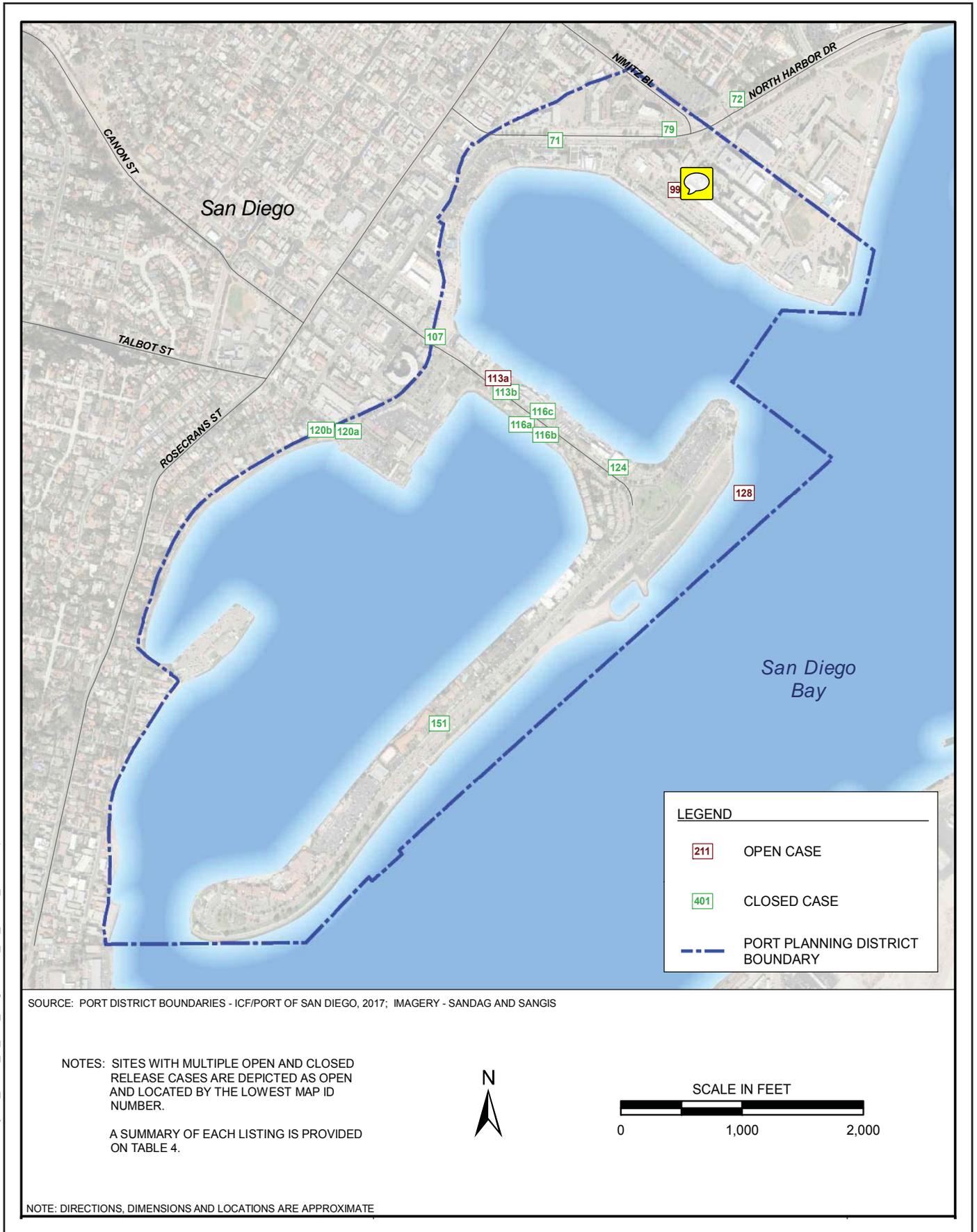
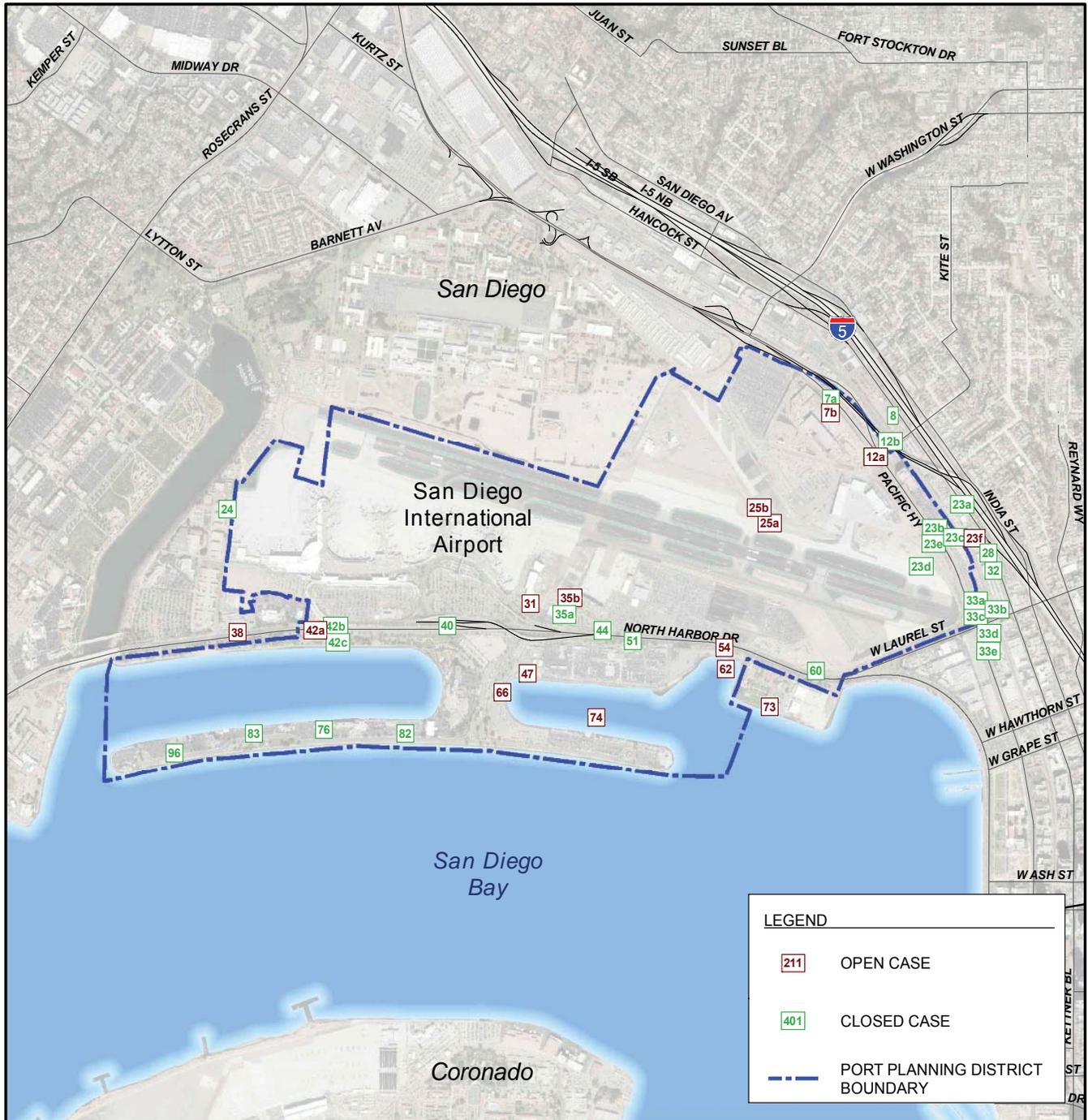


Figure 4.7-1
Planning District 1 – Shelter Island Hazardous Materials Database Results
Port Master Plan Update EIR

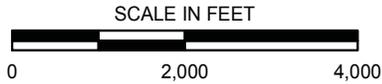
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SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 5.



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE



Figure 4.7-2
Planning District 2 – Harbor Island Hazardous Materials Database Results
Port Master Plan Update EIR

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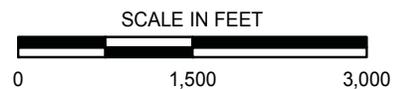
LEGEND

- 211 OPEN CASE
- 401 CLOSED CASE
- PORT PLANNING DISTRICT BOUNDARY

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 6.



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Figure 4.7-3

Planning District 3 – Embarcadero Hazardous Materials Database Results Port Master Plan Update EIR



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SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 7.



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE



Figure 4.7-4 Planning District 4 – Working Waterfront Hazardous Materials Database Results Port Master Plan Update EIR

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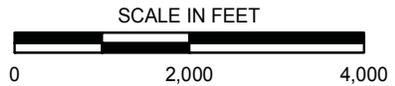


LEGEND	
211	OPEN CASE
401	CLOSED CASE
	PORT PLANNING DISTRICT BOUNDARY

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 10.

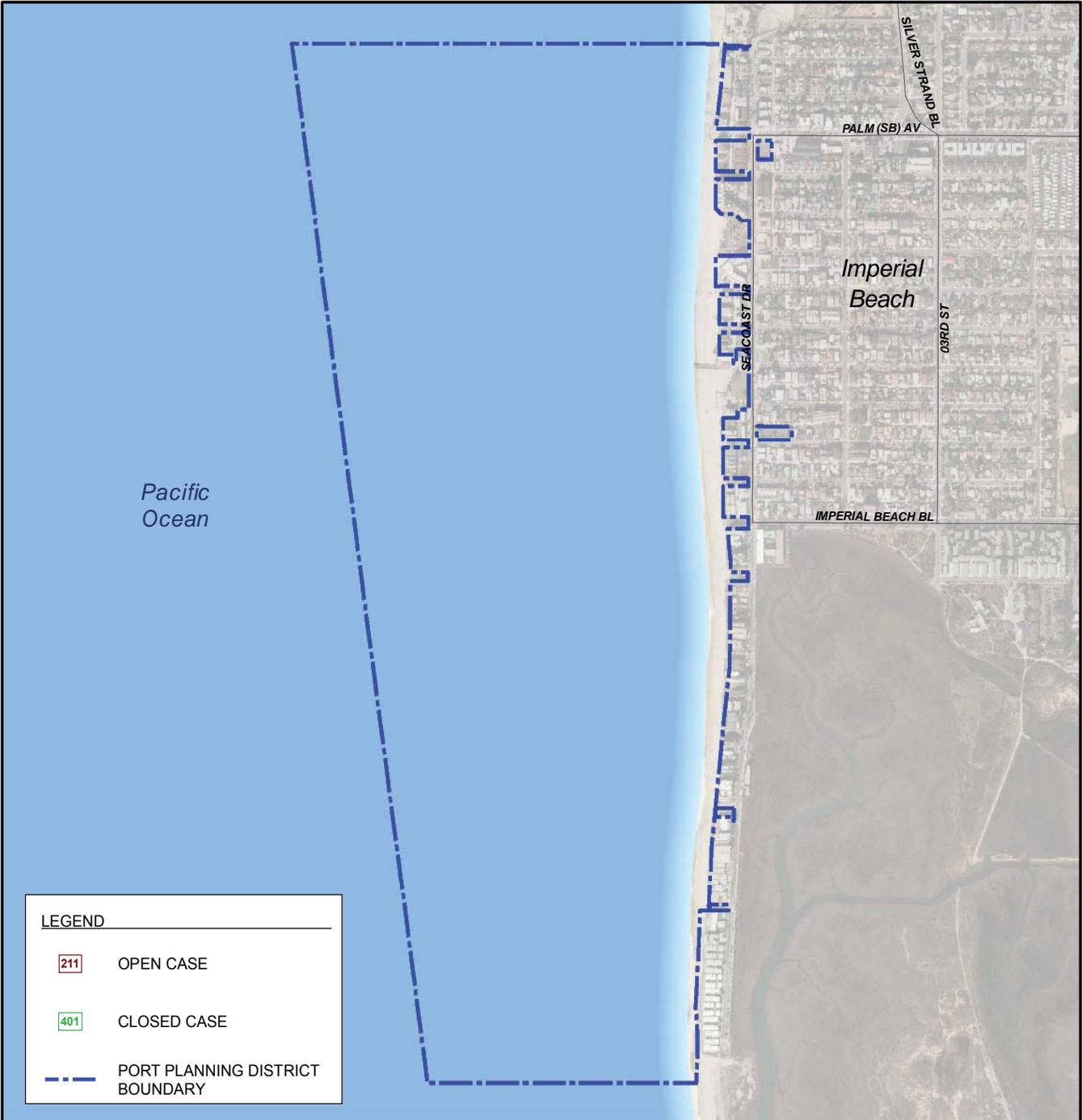


NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE



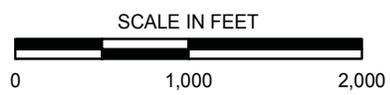
Figure 4.7-5 Planning District 7 – South Bay Hazardous Materials Database Results Port Master Plan Update EIR

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SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE



Figure 4.7-6
Planning District 8 – Imperial Beach Hazardous Materials Database Results
Port Master Plan Update EIR

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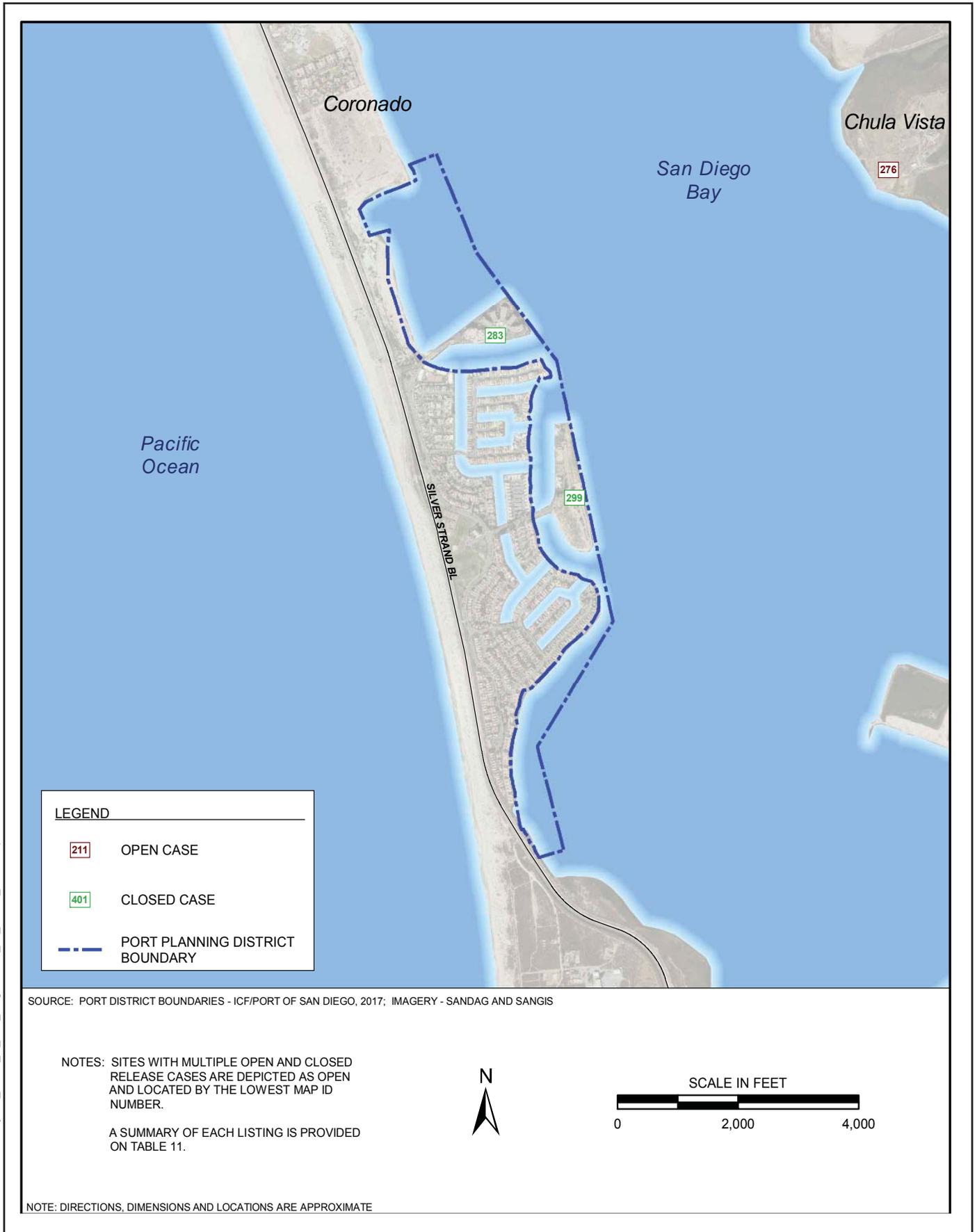


Figure 4.7-7
Planning District 9 – Silver Strand Hazardous Materials Database Results
Port Master Plan Update EIR

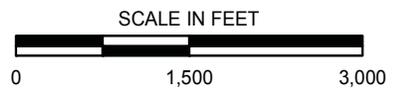
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SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 12.



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE



Planning District 10 – Coronado Bayfront Hazardous Materials Database Results
Port Master Plan Update EIR

Figure 4.7-8

4.7.2.3 Existing Airports and Airstrips Within 2 Miles of the Proposed PMPU Area

All of the planning districts lie either entirely or partially within the Airport Influence Area (AIA) of a public airport or military airport (see Figure 4.7-9). An AIA is established by the Airport Land Use Compatibility Plan (ALUCP) for each airport and represents the boundary where the policies of the ALUCP apply. An ALUCP governs the suitable land uses that may locate within a specified boundary of a public or military airport, to protect the public (SDIA ALUC 2019). The AIA represents that specified area surrounding an airport where current and projected airport-related noise, safety, airspace protection, and overflight factors may influence land uses (ALUC 2014).

Table 4.7-3 provides an overview of the planning districts that would be within the various airport overlay zones associated with SDIA and NOLF Imperial Beach. The SDIA is within the boundaries of PD2 but is not governed by the proposed PMPU; however, the AIA for the SDIA encompasses PD2 and several other planning districts, as shown in Table 4.7-3. Planning District 8 is approximately 0.5 mile west of the Naval Outlying Landing Field (NOLF) Imperial Beach. The AIA for the NOLF Imperial Beach encompasses not only PD8, but also PD7 and PD9.

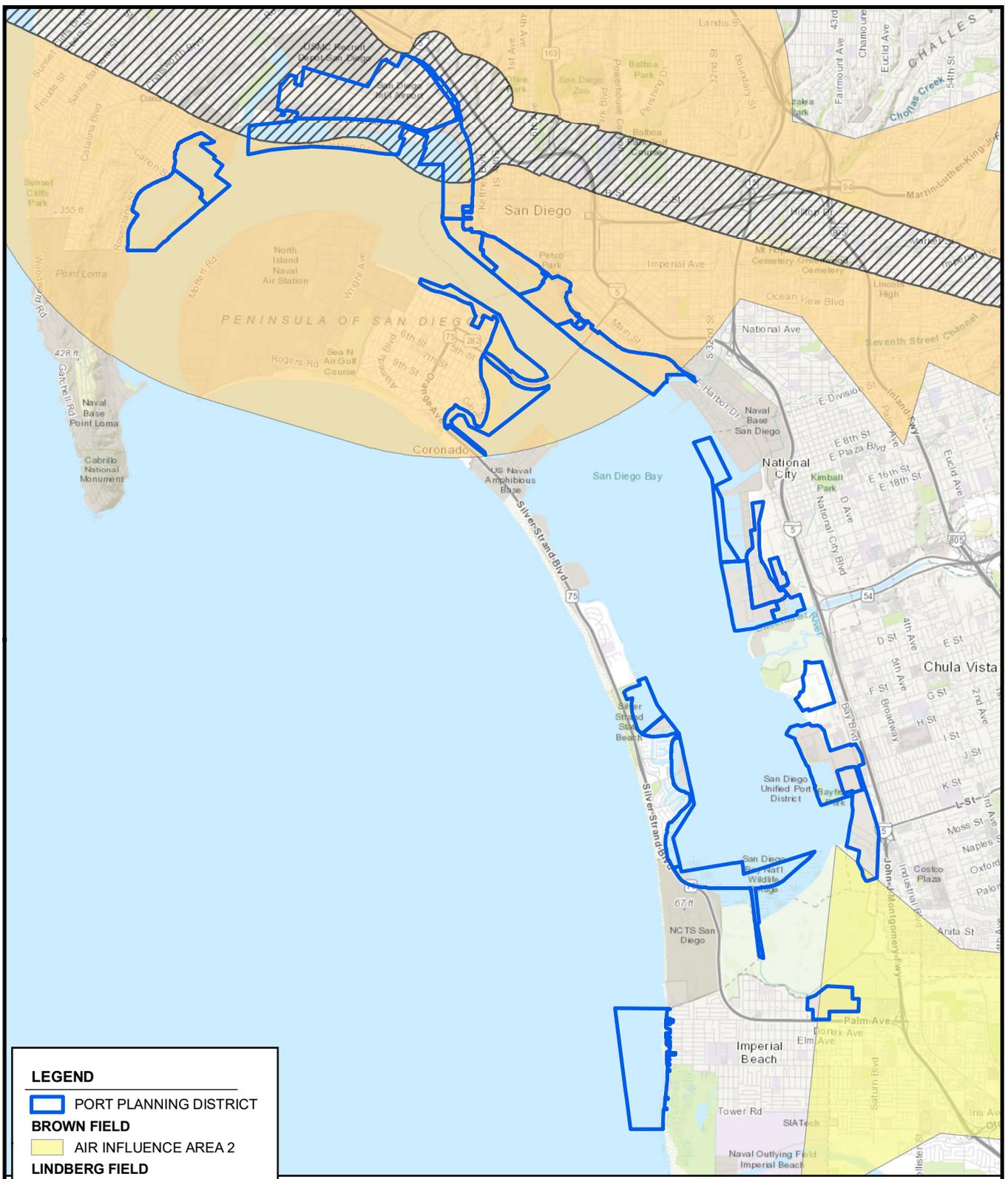
Naval Air Station (NAS) North Island is located on the western portion of the City of Coronado and is within the vicinity of PD1, PD2, and PD10. The San Diego County Airport Land Use Commission approved the ALUCP for NAS North Island in October 2020. The Draft ALUCP indicates all of the planning districts except for PD8 would be within the AIA for NAS North Island. The information in Table 4.7-3 is based on the ALUCP document (SDC ALUC 2020).

Table 4.7-3. Airport Land Use Plan Overlay Zones

Airport Overlay Zone	Planning District
San Diego International Airport	
Airport Influence Area	PD1, PD2, PD3, PD4, PD10
Review Area 1	PD2, PD3
Review Area 2	PD1, PD2, PD3, PD4, PD10
Noise	PD2, PD3
Overflight	PD1, PD2, PD3
Safety	PD2
Threshold Siting Surfaces	PD2
Naval Overlying Landing Field – Imperial Beach	
Airport Influence Area	PD7, PD8, PD9
Review Area 2	PD7
Airspace Protection	PD7, PD8, PD9
NAS North Island	
Airport Influence Area	PD1, PD2, PD3, PD4, PD7, PD9, PD10
Noise	PD1
Overflight	PD1, PD9, PD10
Safety	N/A

Source: San Diego County Regional Airport Authority 2019; SDC ALUC 2020.

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SOURCE: SANBAG; U.S. GEOLOGICAL SURVEY



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.



Figure 4.7-9
Planning District Proximity to Airports and Airstrips
Port Master Plan Update EIR

4.7.3 Laws, Regulations, Plans, and Policies

4.7.3.1 Federal

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The Federal Toxic Substances Control Act (1976, 15 U.S. Code [USC] 2601 et seq.) and the Resource Conservation and Recovery Act of 1976 (RCRA, 42 USC 6901 et seq.) established a program, which is administered by the EPA, to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. Under RCRA regulations (40 Code of Federal Regulations [CFR] Parts 260–299), hazardous wastes must be tracked from the time of generation to the point of disposal. The RCRA program also establishes standards for hazardous waste treatment, storage, and disposal units, which are intended to have hazardous wastes managed in a manner that minimizes present and future threats to the environment and human health. At a minimum, each generator of hazardous waste must register and obtain a hazardous waste activity identification number. If hazardous wastes are stored for more than 90 days or treated or disposed of at a facility, any treatment, storage, or disposal unit must be permitted under the RCRA. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle to grave” system of regulating hazardous materials.

In 1979, the EPA banned the use of PCBs in most new electrical equipment and began a program to phase out certain existing PCB-containing equipment. The use and management of PCBs in electrical equipment is regulated pursuant to the Toxic Substances Control Act, 15 USC 2601 et seq. The Toxic Substances Control Act and its implementing regulations generally require labeling and periodic inspection of certain types of PCB equipment and set forth detailed safeguards to be followed for disposal of such items.

Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)

U.S. Department of Transportation (DOT) Hazardous Materials Regulations (49 CFR Parts 100–185) cover all aspects of hazardous materials packaging, handling, and transportation. Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 173 (Packaging Requirements), 177 (Highway Transportation), 178 (Packaging Specifications), and 180 (Packaging Maintenance) would all apply to goods movement to and from the planning districts. These regulations require that every employee who transports hazardous materials receive training to recognize and identify hazardous materials and become familiar with hazardous materials requirements. Vehicles transporting certain types or quantities of hazardous materials must display placards (warning) signs. Carriers are required to report accidental releases of hazardous materials to DOT and the earliest practical moment. Other incidents that must be reported include deaths, injuries requiring hospitalization, and property damage exceeding \$50,000.

Enforcement of these aforementioned DOT regulations is shared by each of the following administrations under delegations from the Secretary of the DOT.

- **Research and Special Programs Administration** is responsible for container manufacturers, re-conditioners, and re-testers and shares authority over shippers of hazardous materials.

- **Federal Highway Administration** enforces all regulations pertaining to motor carriers.
- **Federal Railroad Administration** enforces all regulations pertaining to rail carriers.
- **Federal Aviation Administration (FAA)** enforces all regulations pertaining to air carriers.
- **U.S. Coast Guard (USCG)** enforces all regulations pertaining to shipments by water.

Additionally, the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans) are the State agencies with primary responsibility for enforcing Federal and State regulations related to transportation within California. These agencies respond to hazardous materials transportation emergencies. Together, these agencies determine container types to be used and grant licenses to hazardous waste haulers for hazardous waste transportation on public roads.

Comprehensive Environmental Response, Compensation, and Liability Act

The CERCLA, commonly known as Superfund, was enacted in 1980 to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The corresponding regulation in 42 CFR 103 provides the general framework for response actions and managing hazardous waste.

Spill Prevention Control and Countermeasure Plans (40 CFR 112.7)

Spill Prevention Control and Countermeasure (SPCC) plans are required for facilities in which construction and removal operations involve oil in the vicinity of navigable waters or shorelines. SPCC plans ensure that facilities implement containment and other countermeasures that would prevent oil spills from reaching navigable waters. SPCC plans are regulations administered by EPA. Preparation of an SPCC Plan is required for projects that meet three criteria: (1) the facility must be non-transportation-related, or, for construction, the construction operations involve storing, using, transferring, or otherwise handling oil; (2) the project must have an aggregate aboveground storage capacity greater than 1,320 gallons or completely buried storage capacity greater than 42,000 gallons; and (3) there must be a reasonable expectation of a discharge into or upon navigable waters of the United States or adjoining shorelines. For construction projects, for criterion (1), 40 CFR 112 describes the requirements for implementing SPCC plans. The following three areas should clearly be addressed in a SPCC plan.

- Operating procedures that prevent oil spills.
- Control measures installed to prevent a spill from reaching navigable waters.
- Countermeasures to contain, clean up, and mitigate the effects of an oil spill that reaches navigable waters.

United States Coast Guard 33 CFR and 46 CFR

The USCG, through Title 33 (Navigation and Navigable Waters) and Title 46 (Shipping) of the CFR, is the Federal agency responsible for vessel inspection, marine terminal operations safety, coordination of Federal responses to marine emergencies, enforcement of marine pollution statutes,

marine safety (such as navigation aids), and operation of the National Response Center for spill response, and is the lead agency for offshore spill response. The USCG implemented a revised vessel-boarding program in 1994 designed to identify and eliminate substandard ships from U.S. waters. The program pursues this goal by systematically targeting the relative risk of vessels and increasing the boarding frequency on high risk (potentially substandard) vessels. The relative risk of each vessel is determined through the use of a matrix that factors the flag of the vessel, owner, operator, classification society, vessel particulars, and violation history. Vessels are assigned a boarding priority from I to IV, with priority I vessels being the potentially highest risk and priority IV having relatively low risk.

Emergency Planning and Community Right-To-Know Act (42 U.S. Code 11001 et seq.)

The Emergency Planning and Community Right-to-Know Act (EPCRA) was enacted by Congress as the national legislation on community safety in 1986, as Title III of the Superfund Amendments and Reauthorization Act. This law was designated to help local communities protect public health, safety, and the environment from chemical hazards. To implement this act, Congress required each state to appoint a State Emergency Response Commission. The State Emergency Response Commissions are required to divide their states into Emergency Planning Districts and to name a Local Emergency Planning Committee for each district. The act provides requirements for emergency release notification, chemical inventory reporting, and toxic release inventories for facilities that handle chemicals.

Occupational Safety and Health Act of 1970

The Occupational Safety and Health Act (OSHA) establishes the framework for safe and healthful working conditions for working men and women by authorizing enforcement of the standards developed under the act. The act also provides for training, outreach, education, and assistance related to establishing a safe working environment. Regulations defining safe standards have been developed for general industry, construction, maritime, recordkeeping, and agriculture. A major component of the act is the requirement that employers implement the Occupational Safety and Health Act Hazard Communication Standard to provide information to employees about the existence and potential risks of exposures to hazardous substances in the workplace. As part of the Hazard Communication Standard, employers must:

- Obtain material safety data sheets from chemical manufacturers that identify the types and handling requirements of hazardous materials used in given areas;
- Make the material safety data sheets available to their employees;
- Label chemical containers in the workplace;
- Develop and maintain a written hazard communication program; and
- Develop and implement programs to train employees about hazardous materials.

Occupational Safety and Health Administration standards specific to hazardous materials are listed in 29 CFR 1910 Subpart H. Safety and health regulations pertaining to construction are listed in 29 CFR 1926 Subpart H.

California has implemented its OSHA regulations under Title 8 of the California Code of Regulations (CCR). Additional information is provided in the subsequent section on State regulations.

14 CFR Part 77 – Safe, Efficient Use, and Preservation of the Navigable Airspace

Code of Federal Regulations, Title 14, Part 77 establishes the requirements to provide notice to the FAA of certain proposed construction of structures or alteration of existing structures. Part 77 also establishes standards used to determine obstructions to air navigation and navigational and communication facilities, the process for aeronautical studies to determine potential effects on navigable space, and the process to petition the FAA for discretionary review of determinations related to construction or alternation.

The FAA Notification overlay outlines the area surrounding the airport required to comply with Federal law requiring notification to the FAA for the construction of new structures or objects in the airspace. Federal law 14 CFR Part 77 Notification Criteria requires project sponsors of structures or objects such as antennas, trees, or construction cranes, that exceed the Part 77 height criteria to submit to the FAA a Notice of Proposed Construction or Alternation (Form 7460-1). The Part 77 height criteria apply to any construction or alteration that is more than 200 feet above the ground anywhere in the United States; and any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

1. 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport...with its longest runway more than 3,200 feet in actual length, excluding heliports.
2. 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport ... with its longest runway no more than 3,200 feet in actual length, excluding heliports.
3. 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport...

Additionally, the FAA may require notification for construction or alternation on applicable airports and heliports; and for structures that may cause signal reception interference with navigational aids (NAVAIDS).

Clean Water Act

The primary goals of the Clean Water Act (CWA) are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and make all surface waters fishable and swimmable. The EPA is the lead Federal agency responsible for water quality management. The CWA (33 USC 1251–1387) amended the Federal Water Pollution Control Act of 1972 and is the primary Federal law that governs and authorizes water quality control activities by EPA as well as the states. The Federal CWA of 1977 established the basic structure for regulating discharges of pollutants into the waters of the United States (not including groundwater). Under the CWA, it is unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a National Pollutant Discharge Elimination System (NPDES) permit is obtained and implemented. In addition, the CWA requires the states to adopt water quality standards for receiving water bodies and have those standards approved by EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing), along with the water quality criteria necessary to support those uses. Following are descriptions of sections of the CWA applicable to the potential release of hazardous materials; for more discussion of the CWA, see Section 4.8.

CWA Section 303: Impaired Water Bodies (303(d) list) and Total Maximum Daily Loads

Under Section 303(d) of the CWA, the SWRCB is required to develop a list of impaired water bodies that do not meet water quality standards (promulgated under the National Toxics Rule or the California Toxics Rule) after the minimum technology-based effluent limitations have been implemented for point sources. Lists are to be priority ranked for development of a TMDL. A TMDL is a calculation of the total maximum amount of a pollutant that a water body can receive on a daily basis and still safely meet water quality standards. The California RWQCBs and EPA are responsible for establishing TMDL waste-load allocations and incorporating improved load allocations into water quality control plans, NPDES permits, and WDRs. Section 305(b) of the CWA requires states to assess the status of water quality conditions and submit a report every 2 years. Both CWA requirements are addressed through development of a 303(d)/305(b) Integrated Report, which will provide both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The SWRCB developed a statewide 2014 and 2016 California Integrated Report that was based on the Integrated Reports from each of the nine RWQCBs. The 2014 and 2016 California Integrated Report was approved by the SWRCB on October 3, 2017, and EPA issued its final decision and approval of the California 303(d) list on April 6, 2018. For a full list of TMDLs issued for the Bay, see Section 4.8.

Section 404: Permits for Dredged or Fill Material

Under Section 404, the U.S. Army Corps of Engineers (USACE) and EPA regulate the discharge of dredged and fill materials into waters of the United States. These waters are defined primarily as navigable waterways or water features (including wetlands) that have a significant nexus to navigable waters. Project sponsors must obtain authorization from USACE for all discharges of dredged or fill materials into waters of the United States before proceeding with a proposed activity. Individual Section 404 permits may be issued only for a least environmentally damaging practicable alternative. Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. USACE cannot issue an individual permit or verify the use of a general permit until the requirements of the National Environmental Policy Act of 1969, Endangered Species Act, Coastal Zone Management Act, and National Historic Preservation Act have been met. In addition, no permit can be issued or verified until a water quality certification, or waiver of certification, has been issued pursuant to CWA Section 401.

Section 404 of the CWA provides for the issuance of dredge/fill permits by the USACE. Permits are typically conditioned to minimize impacts to water quality. Conditions typically include, but are not limited to:

- USACE review and approval of sediment quality analysis prior to dredging. Sediments are tested using approved EPA protocols;
- Detailed pre- and post-construction monitoring plan that includes disposal site monitoring;
- Timing and water quality restrictions on flow back of dredged water at the dredging site with flow-back water meeting RWQCB Waste Water Discharge and Receiving Water Monitoring Program requirements;
- Compensation for loss of waters of the United States, including wetlands.

As part of this regulatory/permitting process, monitoring requirements include measurements of water quality parameters such as dissolved oxygen, light transmittance (turbidity), pH, and

suspended solids at varying distances from the dredging operations. In the unlikely event that dredging activities exceed any of the monitoring levels, the dredging permit would include corrective actions such as use of silt curtains and requiring a slower dredge bucket speed, which would be implemented if the monitoring data indicate that water quality conditions outside of the mixing zone exceed the permit-specified limits.

4.7.3.2 State

Cortese List

California Government Code 65962.5 (commonly referred to as the *Cortese List*) includes hazardous waste facilities and sites listed by DTSC, Department of Health Services lists of contaminated drinking water wells, sites listed by the SWRCB as having underground storage tank leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

California Health and Safety Code (Hazardous Waste Control Act)

The California DTSC, a department of the California Environmental Protection Agency (Cal/EPA), is the primary agency in California for: regulating hazardous waste; cleaning up existing contamination; and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the Federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Division 20, Chapter 6.5, of the California Health and Safety Code identifies hazardous waste control regulations pertaining to transportation, treatment, recycling, disposal, enforcement, and the permitting of hazardous waste. Division 20, Chapter 6.10, identifies regulations applicable to the cleanup of hazardous materials releases. Title 22, Division 4.5, contains environmental health standards for the management of hazardous waste, as well as standards for the identification of hazardous waste (Chapter 11), and standards that are applicable to transporters of hazardous waste (Chapter 13). The Hazardous Waste Control Act requires a hazardous waste generator that stores or accumulates hazardous waste for periods greater than 90 days at an onsite facility or for periods greater than 144 hours at an offsite or transfer facility, which treats or transports hazardous waste, to obtain a permit to conduct such activities. The law provides for the development of a State hazardous waste program that administers and implements the provisions of the Federal RCRA for a cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to or, in some cases, more stringent than Federal requirements, such as mandating source-reduction planning and regulating the number of types of waste and waste management activities that are not covered by Federal law with the RCRA.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (California Health and Safety Code, Chapter 6.11, Sections 25404–25404.9)

This program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the environmental and emergency response programs and provides authority to the CUPA. The CUPA for San Diego County is the San Diego County Department of Environmental Health's (DEH's) Hazardous Materials Division (HMD), which

has the responsibility and authority for implementing and enforcing the requirements listed in Chapter 6.5 (commencing with Section 25100), Chapter 6.67 (commencing with Section 25270), Chapter 6.7 (commencing with Section 25280), Chapter 6.95 (commencing with Section 25500), and Sections 25404.1 and 25404.2, including the following.

- **Aboveground Petroleum Storage Act Requirements for SPCC Plans.** Facilities with a single tank or cumulative aboveground storage capacities of 1,320 gallons or greater of petroleum-based liquid product (e.g., gasoline, diesel, lubricants) must develop an SPCC plan. An SPCC plan must be prepared in accordance with the oil pollution prevention guidelines in 40 CFR 112. This plan must describe the procedures, methods, and equipment needed at the facility to prevent discharges of petroleum from reaching navigable waters. A registered professional engineer must certify the SPCC plan, and a complete copy of the plan must be maintained on site.
- **California Accidental Release Prevention Program.** This program requires any business that handles more than threshold quantities of an extremely hazardous substance to develop a Risk Management Plan. The Risk Management Plan is implemented by the business to prevent or mitigate releases of regulated substances that could have offsite consequences through hazard identification, planning, source reduction, maintenance, training, and engineering controls.
- **Hazardous Materials Business Plan/Hazardous Materials Inventory Statements.** Hazardous Materials Business Plans contain basic information regarding the location, type, quantity, and health risks of hazardous materials and/or waste. Each business must prepare a Hazardous Material Business Plan if that business uses, handles, or stores a hazardous material and/or waste or an extremely hazardous material in quantities greater than or equal to the following.
 - 55 gallons for a liquid
 - 500 pounds for a solid
 - 200 cubic feet for any compressed gas
 - Threshold planning quantities of an extremely hazardous substance
- **Hazardous Waste Generator Program.** This program regulates businesses that generate any amount of a hazardous waste. Proper handling, recycling, treating, storing, and disposing of hazardous waste are key elements to this program.
- **Tiered Permitting Program.** This program regulates the onsite treatment of hazardous waste.
- **Underground Storage Tank Program.** This program regulates the construction, operation, repair, and removal of underground storage tanks that store hazardous materials and/or waste.

Environmental Health Standards for the Management of Hazardous Waste (California Code of Regulations, Title 22, Division 4.5, Section 66001 et seq.)

These standards establish requirements for the management and disposal of hazardous waste in accordance with the provisions of the State Hazardous Waste Control Act and Federal RCRA.

California Code of Regulations, Title 8—Industrial Relations

Title 8 of the CCR, Section 1532.1 (8 CCR 1532.1) is a rule developed by the Federal Occupational Safety and Health Administration in 1993 and adopted by the State of California. This rule is comparable to the Federal standards described above. Occupational safety standards exist in

Federal and State laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The Federal Occupational Safety and Health Administration and the California Division of Occupational Safety and Health (Cal/OSHA) are responsible for ensuring worker safety in the workplace. Cal/OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. These standards would be applicable to both construction and operation of reasonably foreseeable future projects proposed under the proposed PMPU. Title 8 includes regulations pertaining to hazard control (including administrative and engineering controls), hazardous chemical labeling and training requirements, hazardous exposure prevention, hazardous material management, and hazardous waste operations. These regulations also include Compliance with Injury Illness Prevention Program (IIPP) requirements (8 CCR 3203), which would ensure that workers are properly trained to recognize workplace hazards and to take appropriate steps to reduce potential risks due to hazards. A site Health and Safety Plan must be prepared prior to commencing any work at a contaminated site or involving disturbance of building materials containing hazardous substances to protect workers from exposure to potential hazards.

Title 8 also specifies requirements for the removal and disposal of asbestos-containing materials (ACMs). In addition to providing information regarding how to remove ACMs, specific regulations limit the time of exposure, regulate access to work areas, require demarcation of work areas, prohibit certain activities in the presence of ACM removal activities, require the use of respirators, require monitoring of work conditions, require appropriate ventilation, and require qualified persons for ACM removal.

Title 8 also covers the removal of lead-based paint (LBP). Specific regulations cover the demolition of structures that contain LBP, the process associated with its removal or encapsulation, remediation of lead contamination, the transportation/disposal/storage/containment of lead or materials containing lead, and maintenance operations associated with construction activities involving lead, such as LBP. The construction safety orders establish an action level of 30 micrograms of lead per cubic meter ($\mu\text{g}/\text{cm}^3$) of air calculated over an 8-hour time-weighted average without regard for the use of a respirator, meaning this is the limit where safety protocols must be initiated, such as use of a respirator. Under no circumstance may a worker be exposed to $50 \mu\text{g}/\text{cm}^3$ over an 8-hour weighted period. These regulations require implementation of engineering and work practice controls such as respiratory protection, protective clothing, housekeeping, hygiene practices, and signage requirements to meet worker exposure limits. Medical monitoring and training requirements are also identified.

California Labor Code (Division 5, Parts 1 and 7)

California Labor Code regulations ensure appropriate training regarding the use and handling of hazardous materials and the operation of equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5, ensures that employees who handle hazardous materials are appropriately trained and informed about the materials. Division 5, Part 7, ensures that employees who work with volatile flammable liquids are outfitted with appropriate safety gear and clothing.

California Fire Code

The California Fire Code (24 CCR 9) regulates the types, configuration, and quantities of hazardous materials that can be stored within structures. The California Fire Code also regulates the storage of hazardous materials in outdoor areas. These regulations are implemented through regular

inspections of on-site operations and through issuance of notices of violation in cases where storage facilities do not meet code requirements.

Hazardous Waste Control Law

The Cal/EPA and DTSC regulate the generation, transportation, treatment, storage and disposal of hazardous waste. The Cal/EPA has authorized DTSC to enforce the Hazardous waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5, Article 2), which implements the Federal RCRA cradle to grave waste management system in California. It establishes criteria for identifying, packaging, and labeling hazardous waste; prescribes management of hazardous waste establishes permit requirements for hazardous waste treatment, storage, disposal, and transportation and identifies hazardous waste that cannot be disposed of in landfills. California hazardous waste regulations can be found in Title 22, Division 4.5, "Environmental Health Standards for Management of Hazardous Wastes."

Hazardous Materials Release Response Plans and Inventory Law

Businesses in California that handle hazardous materials are required to comply with the Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act, also known as the Waters Bill) (Assembly Bill 2185; California Health and Safety Code, Chapter 6.6). Basic requirements of hazardous materials planning include the development of detailed hazardous materials inventories used and stored on-site, a program of employee training for hazardous materials release response, and the identification of emergency contacts and response procedures. The reporting thresholds for hazardous materials are 55 gallons of a liquid; 500 pounds of a solid; and 200 cubic feet of a compressed gas measured at standard temperature and pressure.

The law aims to ensure that the hazardous materials are properly handled, used, stored, and disposed of, and in the event that such materials are accidentally released, to prevent or reduce injury to health and the environment. This law is also designed to reduce the occurrence and severity of hazardous materials releases. However, an exemption exists for facilities (retail stores) handling hazardous materials contained solely in a consumer product and pre-packaged for direct distribution to, and use by, the general public.

4.7.3.3 Regional

San Diego County Code, Title 6, Division 8

San Diego County Code of Regulatory Ordinances under Title 6, Division 8, Chapters 8 through 11 establish the HMD as the local CUPA. The HMD is responsible for the protection of public health, safety, and the environment and inspects businesses or facilities that handle or store hazardous materials, generate hazardous waste, generate medical waste, and own or operate underground storage tanks. HMD also administers the California Accidental Release Prevention Program and the Aboveground Petroleum Storage Act Program, and provides specialized instruction to small businesses through its Pollution Prevention Specialist. HMD has the authority under State law to inspect facilities with hazardous materials or hazardous waste and, in cases where a facility is in non-compliance with the applicable State law or regulations, take enforcement action.

Projects are required to notify HMD regarding the use, handling, release (spills), storage, and/or disposal of hazardous materials and hazardous waste in accordance with existing State law and

County ordinance. The notification is the initial step in the HMD permitting process, which requires businesses that handle or store hazardous materials, are part of the California Accidental Release Prevention Program, generate or treat hazardous wastes, generate or treat medical waste, store at least 1,320 gallons of aboveground petroleum, or own and/or operate underground storage tanks to obtain and maintain a Unified Program Facility Permit. The online notification must be done using the State of California Environmental Reporting System by the applicant/permittee requesting a permit and submitted within 30 days.

If a building permit is required, Section 65850.2 of the California Government Code prohibits building departments from issuing a final Certificate of Occupancy to businesses or facilities that handle hazardous materials unless they have submitted and met the requirements of a Hazardous Materials Business Plan. The Hazardous Materials Business Plan contains detailed information on the storage of hazardous materials at regulated facilities and serves to prevent or minimize damage to public health, safety, and the environment from a release or threatened release of a hazardous material. The Hazardous Materials Business Plan also provides emergency response personnel with adequate information to help them better prepare and respond to chemical-related incidents at regulated facilities.

Operational Area Emergency Operations Plan

The San Diego County Operational Area was formed to help the County and its incorporated cities develop emergency plans, implement such plans, develop mutual aid capabilities between jurisdictions, and improve communications between jurisdictions and agencies. The San Diego County Operational Area consists of the County and all jurisdictions within the County. The Operational Area Emergency Operations Plan is for use by the County and all the cities within the County to respond to major emergencies and disasters. It defines roles and responsibilities of all County departments and many city departments.

Cities within the County are encouraged to adopt the Operational Area Emergency Operations Plan, with modifications that would be applicable to each city. The plan is updated once every 4 years by the Office of Emergency Services and the Unified Disaster Council of the Unified San Diego County Emergency Services Organization.

The District has developed a basic Emergency Operations Plan, as well as supplemental preparedness plans that cover topics such as hazard mitigation and continuity of operations in accordance with the Standardized Emergency Management System (SEMS) and National Incident Management System (NIMS). SEMS and NIMS are the established State and Federal emergency response standards, respectively. These standards ensure continuity in planning and response to critical incidents, disasters and planned events which impact communities. The District's emergency response plans are reviewed and updated regularly in accordance with the SEMS and NIMS standards. Integral in these emergency response plans is coordination between Local, State and Federal agencies, as well external communications with the community, businesses and other stakeholders.

4.7.3.4 Local

City of San Diego Solid Waste Local Enforcement Agency

The City's Solid Waste Local Enforcement Agency is responsible for enforcing Federal and State laws and regulations for the safe and proper handling of solid waste. State law (Public Resources Code) requires that every local jurisdiction designate a solid waste Local Enforcement Agency that is certified by the Department of Resources Recycling and Recovery to enforce Federal and State laws and regulations for the safe and proper handling of solid waste.

Any development plan proposing to handle, process, transport, store, or dispose of solid wastes including household trash and garbage, construction debris, commercial refuse, sludge, ash, discarded appliances and vehicles, manure, landscape clippings, and other discarded wastes shall contact the Local Enforcement Agency for determination of the need for a solid waste facility permit.

Best Management Practices and Environmental Standards for Overwater Structural Repair and Maintenance Activities for Existing Port Facilities Conducted by the San Diego Unified Port District

The District developed Best Management Practices (BMPs) and Environmental Standards (collectively, "Standards") for any and all routine repairs and maintenance activities conducted by the District that involve existing overwater structures, such as piers, docks, and wharves, in order to avoid or minimize the potential to increase water turbidity. The Standards address how to conduct and monitor in-water construction activities that have the potential to increase turbidity, including without limitation, pile removal and installation via jetting, impact hammer, and various vibratory methods. The Standards also outline the requirements for disposal of creosote treated piles at District facilities. The District's implementation of the Standards is intended to ensure water quality standards are not exceeded and to protect the environment, San Diego Bay, and the Pacific Ocean. The Standards apply to in-water repair and maintenance activities for existing facilities conducted by the District under its USACE Regional General Permit No. 72, but would not be applied to construction of new facilities. This includes limitations on pile jetting to minimize sediment displacement, use of silt curtains, and limitations on pile driving activity. A Summary of the District's Standards are available online at: <https://pantheonstorage.blob.core.windows.net/ceqa/2019-057-CatDet.pdf>. <https://pantheonstorage.blob.core.windows.net/ceqa/2019-057-CatDet.pdf>. More detailed information is available in the District's June 18, 2019, Staff Report (Item 18) and attachments thereto, which are available online at: <https://portofsandiego.legistar.com/LegislationDetail.aspx?ID=3984328&GUID=FF187847-E9BC-4D2A-9C55-ACD0F0DE6812> [see Attachments A and C]].

Water Quality Regulations

In addition to the regulations discussed above, there are several water quality regulations and laws that pertain to reasonably foreseeable future development projects, which would have co-benefits related to the prevention of hazardous material spills. Because these regulations are specific to water quality, more detail is provided in Section 4.8. Other regulations include but are not limited to the requirements set forth by the SWRCB Construction General Permit, RWQCB Municipal Stormwater Permit, the District's Jurisdictional Runoff Management Program (JRMP) and *BMP Design Manual*, District Code Article 10, District Ordinance No. 2681 (In-Water Hull Cleaning

Regulations, and the Temporary Groundwater Extractions Permit), all of which are discussed in detail in Section 4.8.

4.7.4 Project Impact Analysis

4.7.4.1 Methodology

The following impact analysis evaluates the potential effects on hazards and hazardous materials that could occur from future development under the proposed PMPU. The methodology considers the existing hazardous conditions established above in order to determine the PMPU's potential to create or exacerbate a hazardous condition.

The impact analysis is organized first by identifying any policies or standards proposed in the PMPU that would assist with avoiding, eliminating, or reducing any impact associated with hazards and hazardous materials. The analysis then considers the potential hazards and hazardous materials impacts from the reasonably foreseeable future projects that could be constructed and operated consistent with the proposed PMPU's water and land uses. Finally, the analysis also considers any policies or standards that may cause or contribute to any related hazards and hazardous materials impact.

To avoid redundancy in the analysis and present a concise discussion, the analysis discusses the planning districts collectively, as appropriate. In the event that a planning district has unique or special existing conditions and/or may result in one or more unique significant impacts with mitigation specific to that planning district, the analysis presents a separate discussion of that planning district.

4.7.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines and provide the basis for determining significance of impacts associated with hazards and hazardous materials resulting from the implementation of the PMPU. The determination of whether a hazards and/or hazardous materials impact would be significant is based on the thresholds described below and the professional judgment of the District as Lead Agency, based on the evidence in the administrative record.

Impacts are considered significant if the project would result in any of the following.

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
3. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
4. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

5. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area?
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
7. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including in areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

As discussed in Section VIII of the Initial Study prepared for the proposed PMPU (Appendix A), Threshold 7 is not included in the analysis below, as it was determined that the PMPU would not result in significant impacts related to increasing the risk of wildfires. The conclusion and the supporting rationale are summarized in Chapter 5, *Additional Consequences of PMPU Implementation*. Therefore, only Thresholds 1 through 6 are discussed in the following impact analysis.

4.7.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policies would have the potential to reduce or avoid impacts associated with hazards and hazardous materials and are considered in the impact analysis that follows.

ECO Policy 2.2.1 The District shall prioritize and pursue opportunities for the protection and enhancement of sediment quality.

ECO Policy 2.2.2 Remediation and restoration efforts shall be implemented in a manner that maximizes ecological benefits, including water quality, ecosystems, and the public use of Tidelands consistent with the Port Act.

ECO Policy 2.2.3 Development shall not result in degradation beyond regulatory or legal limits for fill, soil, and sediment quality and shall minimize exposure of adjacent communities to fill, soil, and sediment-based environmental contamination. Also, refer to ECO Policy 2.3.3.

ECO Policy 2.3.3 Where development disrupts shoreline fill or Bay sediment, it shall remove contaminated fill or appropriately contain and remediate the fill.

ECO Policy 2.3.4 Permittees shall implement measures to prevent pollution impacts and adverse impacts from runoff flows from all development and maintenance activities.

SR Policy 1.1.7 Development within an Airport Land Use Compatibility Plan (ALUCP) defined safety compatibility zone shall be sited and designed to minimize the risk of personal injury to people and damage to property in the air and on the ground, consistent with ALUCP requirements.

SR Policy 1.1.8 The District shall:

- a. Restrict development of any project that would cause hazards to air navigation located within airport approach and departure areas or known flight patterns within the applicable Airport Influence Area (AIA), and

- b. Restrict future uses that may impact airport operations or not meet State or federal aviation standards, including the introduction of new incompatible uses within Runway Protection Zones (RPZs).

SR Policy 1.1.9 Permittees shall coordinate as appropriate, with the Federal Aviation Administration on proposed developments (structures and temporary equipment) that meet the notification criteria as defined by Code of Federal Regulations Title 14, Part 77.

SR Policy 2.1.1 The District shall maintain and direct its permittees to maintain emergency disaster mitigation, preparation, response, and recovery capabilities.

SR Policy 2.1.2 The District shall maintain emergency response and recovery processes and plans and periodically update these processes and plans, as appropriate, in preparation for future hazard conditions.

SR Policy 2.1.3 The District shall coordinate with regional, State, and federal partners to create, maintain, and update the District's emergency operations plan, as needed.

SR Policy 2.1.4 The District shall maintain a hazard mitigation plan to help identify and respond to risks associated with natural and human-caused hazards. Such a plan may be a District-wide plan, a series of site-specific plans, or part of a regional plan.

SR Policy 2.1.5 The District shall periodically update the Tidelands' hazard mitigation plan with best available science-guided information.

SR Policy 2.1.6 The District shall engage with adjacent jurisdictions, regional, State, federal partners, and private businesses during emergencies and catastrophic events for effective response and recovery.

SR Policy 2.1.7 The District shall coordinate with federal agencies and marine terminal tenants and operators to establish readiness for terminal facility sharing to support strategic Department of Defense needs and requirements.

4.7.4.4 Project Impacts and Mitigation Measures

Threshold 1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Impact Analysis

As described under Section 4.7.3, there are numerous Federal and State laws and regulations that govern the safe handling, storage, transport, and disposal of hazardous materials and waste, and several Federal, State, and local agencies that provide enforcement.

- The Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act regulates the generation, transport, treatment, storage, and disposal of hazardous waste. These Federal acts are enforced by the EPA.
- The Department of Transportation Hazardous Materials Regulations (49 CFR 100–185) cover all aspects of hazardous materials packaging, handling, and transportation. Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response),

173 (Packaging Requirements), 177 (Highway Transportation), 178 (Packaging Specifications), and 180 (Packaging Maintenance) would all apply to goods movement to and from the planning areas. Provide required procedures for the transport of hazardous materials as well as policies for the reporting and response of emergency spills or releases.

- CERCLA establishes prohibitions and requirements concerning closed and abandoned hazardous waste sites. CERCLA provides the Federal set of regulations to respond to releases and threatened release of hazardous substances, and the long-term remediation of polluted properties, and is enforced by the EPA.
- The Spill Prevention Control and Countermeasure Plans (40 CFR 112.7) ensure that facilities implement containment and other countermeasures that would prevent oil spills from reaching navigable waters. Facilities that meet the following criteria would be required to prepare and implement a SPCC Plan:
 - Facilities that store, transfer, use or consume oil or oil products, such as diesel fuel, gasoline, lube oil, hydraulic oil, adjuvant oil, crop oil, vegetable oil or animal fat; and
 - Facilities that store more than 1,320 U.S. gallons in total of all aboveground containers (only count containers with 55 gallons or greater storage capacity) or more than 42,000 gallons in completely buried containers; and
 - Facilities that could reasonably be expected to discharge oil to navigable waters of the U.S. or adjoining shorelines, such as lakes, rivers and streams.
- Existing facilities in the proposed PMPU area and reasonably foreseeable future projects that would involve facilities that meet these criteria would be subject to the SPCC Plans, which minimize the risk of potential spills, as well as control a spill should one occur. The County DEH is responsible for enforcement of SPCCs. The U.S. Coast Guard 33 CFR and 46 CFR provides the USCG the authority to inspect vessels, ensure marine terminal operations safety, coordinate Federal responses to marine emergencies, enforce marine pollution statutes, ensure marine safety (such as navigation aids), and operate the National Response Center for spill response. Oil spills must be reported to the U.S. Coast Guard National Response Center and EPA pursuant to the CWA (40 CFR 110), and the U.S. Coast Guard enforces spill response procedures and standards.
- The Emergency Planning and Community Right-To-Know Act (42 USC 11001 et seq.), enforced by the EPA, establishes, among other things, requirements for emergency release notification, chemical inventory reporting, and toxic release inventories for facilities that handle chemicals.
- The OSHA of 1970 provides regulations that define safe standards have been developed for general industry, construction, maritime, recordkeeping, and agriculture to ensure the safe and healthful working conditions for working men and women. OSHA is enforced by the Occupational Safety and Health Administration, which is part of the United States Department of Labor.
- The Cortese List (California Government Code 65962.5) includes hazardous waste facilities and sites listed by DTSC, Department of Health Services lists of contaminated drinking water wells, sites listed by the SWRCB as having underground storage tank leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

- California Health and Safety Code (Hazardous Waste Control Act) provides for the development of a State hazardous waste program that administers and implements the provisions of the Federal RCRA for a cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to or, in some cases, more stringent than Federal requirements, such as mandating source-reduction planning and regulating the number of types of waste and waste management activities that are not covered by Federal law with the RCRA. The associated regulations and programs are enforced by the local CUPA (i.e., San Diego County DEH HMD).
- The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (California Health and Safety Code, Chapter 6.11, Sections 25404–25404.9) serves to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities of the environmental and emergency response programs and provides authority to the local CUPA (i.e., San Diego County DEH HMD). The DEH HMD is responsible for overseeing SPCC Plans, the California Accidental Release Prevention Program, Hazardous Materials Business Plans and Inventory Statements, Hazardous Waste Generator Program, Tiered Permitting Program, and the Underground Storage Tank Program. See *San Diego County Code, Title 6, Division 8*, as well.
- Environmental Health Standards for the Management of Hazardous Waste (California Code of Regulations, Title 22, Division 4.5, Section 66001 et seq.) establish requirements for the management and disposal of hazardous waste in accordance with the provisions of the State Hazardous Waste Control Act and Federal RCRA. These standards are enforced by the Local CUPA (i.e., San Diego County DEH HMD).
- California Code of Regulations, Title 8—Industrial Relations includes regulations pertaining to hazard control (including administrative and engineering controls), hazardous chemical labeling and training requirements, hazardous exposure prevention, hazardous material management, and hazardous waste operations. Moreover, this regulation provides requirements for the removal and disposal of ACMs and LBP to ensure their safe removal and disposal. The DTSC within the California Environmental Protection Agency is responsible for enforcement of regulations pertaining to hazard management and control.
- California Labor Code (Division 5, Parts 1 and 7) regulations ensure appropriate training regarding the use and handling of hazardous materials and the operation of equipment and machines that use, store, transport, or dispose of hazardous materials. Labor laws are enforced by Cal/OSHA.
- California Water Code (Division 7) authorizes the San Diego RWQCB to regulate the investigation and cleanup of polluted sites.
- Title 22, Division 4.5 of the CCR authorizes DTSC oversight of contaminated sites and hazardous materials facilities.

In addition, there are several water quality regulations and laws that pertain to reasonably foreseeable future development projects, which would have co-benefits related to the prevention of hazardous material spills. Because these regulations are specific to water quality, more detail is provided in Section 4.8. Other regulations include, but are not limited to, the requirements set forth by the SWRCB Construction General Permit, RWQCB Municipal Stormwater Permit, the District's JRMP and *BMP Design Manual*, District Code Article 10, and the Temporary Groundwater Extractions Permit.

Construction

The proposed PMPU serves as a long-term planning blueprint for future development within the proposed PMPU area. Future development currently anticipated in the planned improvements or each planning district's Vision, as well as development consistent with the water or land use designation for a proposed development site, as described in Table 3-2, may occur. Construction activities for future PMPU-related development would involve the temporary use of common hazardous materials such as petroleum-based substances (cleaners, solvents, fuels, lubricants, and oils), as well as metals and other construction materials. Generally, standard construction materials do not include acutely hazardous materials, and inadvertent releases of hazardous materials on construction sites are typically localized and would be cleaned up in a timely manner. The transport, use, and disposal of construction-related hazardous materials would be required to comply with applicable regulations, as described above, such as the RCRA (40 CFR 260-299), DOT Hazardous Materials Regulations (49 CFR 100-185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; and California Labor Code Division 5, Parts 1 and 7. Also, the transport, use, and disposal of such materials would be subject to regulatory agency oversight and inspection, including by the applicable fire departments (storage) and County DEH. Further, potential releases of hazardous substances during construction would be addressed through the EPCRA, which is administered in California by the State Emergency Response Commission (SERC), the Hazardous Material Release Response Plans and Inventory Law, and the California Hazardous Waste Control Law, which would govern proper containment, spill control, and disposal of hazardous waste generated during construction. Construction BMPs would be implemented as part of a Stormwater Pollution Prevention Plan (SWPPP) as required by the statewide NPDES General Permit for Construction Activities for sites disturbing 1 acre or more. Required construction BMPs are designed to reduce potential adverse effects on the general public and the environment. The SWPPP includes measures to eliminate or reduce pollutant discharges and describes the implementation of BMPs to control stormwater and other runoff during construction. BMPs include, but are not limited to:

- Control erosion and sedimentation associated with construction-related surface disturbance.
- Establish a dedicated area for fuel storage and refueling activities that includes secondary containment protection measures and spill control supplies.
- Follow manufacturer's recommendations on use, storage and disposal of chemical products used in construction.
- Avoid overtopping construction equipment fuel gas tanks.
- During routine maintenance of construction equipment, properly contain and remove grease and oils.
- Properly dispose of discarded containers of fuels and other chemicals.

Requirements of the General Permit for Construction Activities also include the preparation of a spill prevention and response plan which is incorporated into the SWPPP. The spill prevention and response plan includes BMPs to reduce chances of spills, and to catch spills as soon as they happen, and procedures to stop and clean-up spills correctly. BMPs could include, but are not limited to, use secondary containment for storage of liquid materials, use correct labels for all materials, use catch basin filtration, and/or stockpile spill cleanup materials near storage area for hazardous materials.

These regulations, and the oversight provided by the local CUPA (County DEH), the USCG, the San Diego RWQCB, DTSC, California Highway Patrol, and Caltrans, given authority under these

aforementioned regulations, would prevent or minimize potential impacts related to hazards to the public or the environment through the routine transport, use, storage, or disposal of hazardous materials. Therefore, impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, *Project Description*, the Board of Port Commissioners (Board) may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this Program Environmental Impact Report (PEIR). A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the routine transport, use, or disposal of hazardous materials.

Construction activities associated with the new Waterfront Destination Park would involve the use of hazardous materials typically used for construction, including petroleum-based substances (cleaners, solvents, fuels, lubricants, and oils), as well as metals and other construction materials. However, the use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; and California Labor Code Division 5, Parts 1 and 7. Also, their use, transport, and disposal would be subject to regulatory agency oversight and inspection, including by the applicable fire departments (storage) and County DEH (CUPA). Compliance with these regulations would ensure the safe handling of hazardous materials during transport, use and disposal. Thus, construction under Option 1 would not result in any additional impacts related to the routine transport, use, or disposal of hazardous materials during construction than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the routine transport, use, or disposal of hazardous materials.

Construction activities associated with the expanded Lane Field Setback Park would involve the use of hazardous materials typically used for construction, including petroleum-based substances (cleaners, solvents, fuels, lubricants, and oils), as well as metals and other construction materials. However, the use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; and California Labor Code Division 5, Parts 1 and 7. Also, their use, transport, and disposal would be subject to regulatory agency oversight and inspection, including by the applicable fire departments (storage) and County DEH (CUPA). Compliance with these regulations would ensure the safe handling of hazardous materials during transport,

use and disposal. Thus, construction under Option 2 would not result in any additional impacts related to the routine transport, use, or disposal of hazardous materials during construction than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the routine transport, use, or disposal of hazardous materials.

Construction activities associated with the new park space that could be developed under Option 3 would involve the use of hazardous materials typically used for construction, including petroleum-based substances (cleaners, solvents, fuels, lubricants, and oils), as well as metals and other construction materials. However, the use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; and California Labor Code Division 5, Parts 1 and 7. Also, their use, transport, and disposal would be subject to regulatory agency oversight and inspection, including by the applicable fire departments (storage) and County DEH (CUPA). Compliance with these regulations would ensure the safe handling of hazardous materials during transport, use and disposal. Thus, construction under Option 3 would not result in any additional impacts related to the routine transport, use, or disposal of hazardous materials during construction than buildout of the proposed PMPU without Option 3.

Operation

The proposed PMPU serves as a long-term planning blueprint for future development within the proposed PMPU area. Future development currently anticipated in the planned improvements or each planning district's Vision, as well as development consistent with the water or land use designation for the proposed development site, as described in Table 3-2, may occur. The operation of future development consistent with these water and land uses would use common hazardous materials, such as petroleum-based substances for mechanical and motorized equipment, vessels, and vehicles; and solvents, lubricants, and cleaners for facility maintenance. The transport, storage, use, and disposal of these hazardous materials would be regulated by the applicable oversight agencies and regulations, including the local CUPA (County DEH), DOT Hazardous Materials Regulations, DTSC, USCG, San Diego RWQCB, California Highway Patrol, and Caltrans.

The PMPU area includes marinas, marine terminals, and other commercial and recreational uses that require the use of petroleum-based substances and other common hazardous materials. Based on the HMTS, there are 48 RCRA – Large Quantity Generators (LQGs), which generate, transport, store, treat, and/or dispose of over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month, located within the 1/16-mile radius from each PMPU planning district boundary; and 86 RCRA – Small Quantity Generators (SQGs), which generate between 100 kg and 1,000 kg of hazardous waste per month located within the 1/16-mile radius from each PMPU planning district boundary. Additionally, PD4 is unique in that it is dominated by industrial uses, including ship building and repair, and a marine cargo terminal (i.e., TAMT). These land uses would result in the use of common types of hazardous materials (e.g., fuel, cleaning products and solvents, paints, oils, fuel, and grease associated with equipment operation and maintenance). Based on the findings of the HMTS, there are 31 facilities in PD4 that are listed on the RCRA databases, which

identify Large Quantity Generators, Small Quantity Generators, Conditionally Exempt Small Quantity Generators, and Non-Generators/No Longer Regulations facilities, as defined by 40 CFR 261. Hazardous waste types regulated by the RCRA that could be found at these facilities could include, but are not limited to, waste oil, paint, or PCB-contaminated materials. Proposed water and land uses for PD4 would allow for the continued operation of the existing marine terminal uses, which may result in the use and transport of hazardous materials, including but not limited to those listed above, and in the generation of hazardous waste.

Planning District encompasses the TAMT, which handles a variety of cargo types such as dry bulk, liquid bulk, refrigerated containers, and multi-purpose general cargo, as well as maritime industrial businesses. Some types of cargo handled at and transported through, or materials used at, TAMT may be considered a hazardous material (such as petroleum-based fuels and lubricants, refrigerants, and other chemicals). As described further in Chapter 1, *Introduction*, of this PEIR, the District prepared the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component FEIR (UPD# EIR-2015-39; SCH# 2015-031046), which analyzed infrastructure improvements to accommodate an increase in the terminal's capabilities and throughput capacity through 2035. The Final EIR (FEIR) was certified by the Board of Port Commissioners in December 2016 and is incorporated by reference within this PEIR (District 2016).

The PMPU does not propose any changes to the maximum sustainable throughput capacity identified in the certified TAMT EIR, which totaled 4,675,567 metric tons of annual throughput at buildout of the TAMT Redevelopment Plan (i.e., 2035). While no operational changes are proposed at the terminal, the proposed PMPU would allow for operations to continue at TAMT through the PMPU planning horizon of 2050, effectively extending the life of the TAMT Redevelopment Plan an additional 15 years. Therefore, because PD4 is almost entirely built out or, in the case of TAMT, currently has a modernization plan to increase throughput to the maximum sustainable capacity and has established mitigation measures in the certified TAMT EIR, the PMPU proposed water and land use designations would not result in substantial development in this planning district. Potential development is primarily focused on improving the efficiency of operations at both TAMT (consistent with the TAMT Redevelopment Plan) and the shipyards by upgrading existing facilities and infrastructure.

Storage, use, transport, and disposal of hazardous materials would continue to be required to comply with Federal, State, and local regulations, as discussed in this section. Specific examples include regulations (e.g., 40 CFR 112.7) that require that the onsite facilities implement containment and other countermeasures that would prevent oil spills from reaching navigable waters as well as the creation and maintenance of Risk Management Plans and Hazardous Materials Business Plans (i.e., California Health and Safety Code Chapter 6.11, Sections 25404–25404.9). Compliance with these regulations and the others described in this impact analysis section (i.e., RCRA, DOT Hazardous Materials Regulations, CERCLA, CWA, DTSC regulations, and local CUPA regulations), both at the shipyards and TAMT, require hazardous materials to be stored properly and any accidental spills to be promptly cleaned up based on the mandatory hazardous plans.

In summary, the proposed water and land uses would allow future development that would, in many cases, involve the use of commonly used hazardous materials, such as cleaners, solvents, fuels, oils, or lubricants, for normal cleaning and maintenance activities of facilities, equipment, vessels, and vehicles. In addition, some of the primary and secondary uses, such as Marine Terminal and Maritime Services and Industrial would store, use, and/or transport hazardous materials regularly. As referenced in Section 4.7.3, the transport, storage, use, and disposal of hazardous materials and

waste is regulated by the DOT, DTSC, USCG, and County DEH. Compliance with the existing laws and regulations would reduce potential hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials to a less-than-significant level. Compliance with regulations associated with the transport of hazardous materials including but not limited to DOT Hazardous Materials Regulations would reduce potential risks associated with the transport and delivery of hazardous materials during operation. Compliance with the SPCC Plans would minimize the risk potential oil spills reaching navigable waters at facilities such as shipyards and marinas. OSHA regulations (29 CFR 1910 Subpart H) would reduce the potential impacts on workers while handling hazardous materials by requiring training for workers, as well as protective measures that must be implemented at the workplace. California Health and Safety Code, Chapter 6.11, Sections 25404–25404.9 authorize the County DEH as the local CUPA, which enforces the Hazardous Waste Generator Program, Tiered Permitting Program, and the Underground Storage Tank Program for all qualified facilities. Compliance with Title 8 and Title 22 of the CCR would ensure the adherence to management requirements established for the proper management and disposal of hazardous materials. Because compliance with these existing regulations is mandatory and there are oversight steps in place provided by the appropriate regulatory agencies, including permitting and inspection by various hazardous materials regulatory agencies (i.e., DOT, DTSC, USCG, County DEH, San Diego RWQCB, California Highway Patrol, and Caltrans), impacts would be less than significant, and no mitigation is required.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the routine transport, use, or disposal of hazardous materials.

Operational activities associated with the new Waterfront Destination Park may involve the periodic use of hazardous materials typically used for cleaning and maintenance, such as cleaners, solvents, fuels, oils, or lubricants. Option 1 would not include the storage of hazardous materials as it would be a recreational space. The use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; California Labor Code Division 5, Parts 1 and 7; and OSHA regulations (29 CFR 1910 Subpart H). Also, their use, transport, and disposal would be subject to regulatory agency oversight and inspection by County DEH (CUPA). Compliance with these regulations would ensure the safe handling of hazardous materials during routine transport, use, and disposal. Thus, operation of Option 1 would not result in any additional impacts related to the routine transport, use, or disposal of hazardous materials than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the routine transport, use, or disposal of hazardous materials.

Operational activities associated with the expanded Lane Field Setback Park may involve the periodic use of hazardous materials typically used for cleaning and maintenance, such as cleaners, solvents, fuels, oils, or lubricants. Option 2 would not include the storage of hazardous materials as it would be a recreational space. The use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; California Labor Code Division 5, Parts 1 and 7; and OSHA regulations (29 CFR 1910 Subpart H). Also, their use, transport, and disposal would be subject to regulatory agency oversight and inspection by County DEH (CUPA). Compliance with these regulations would ensure the safe handling of hazardous materials during routine transport, use, and disposal. Thus, operation of Option 2 would not result in any additional impacts related to the routine transport, use, or disposal of hazardous materials than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the routine transport, use, or disposal of hazardous materials.

Operational activities associated with the new park space that could be developed under Option 3 may involve the periodic use of hazardous materials typically used for cleaning and maintenance, such as cleaners, solvents, fuels, oils, or lubricants. Option 3 would not include the storage of hazardous materials as it would be a recreational space. The use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; California Labor Code Division 5, Parts 1 and 7; and OSHA regulations (29 CFR 1910 Subpart H). Also, their use, transport, and disposal would be subject to regulatory agency oversight and inspection by County DEH (CUPA). Compliance with these regulations would ensure the safe handling of hazardous materials during routine transport, use, and disposal. Thus, operation of Option 3 would not result in any additional impacts related to the routine transport, use, or disposal of hazardous materials than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in significant impacts related to the potential release of hazardous materials during routine use, transport, and disposal. The proposed PMPU policies listed in Section 4.7.4.3. would reduce impacts on the environment or adjacent communities from potential degradation from pollution or environmental contamination related to development. The policies outline initiatives that would be implemented by the District to reduce the release of pollutants, as well as requirements for project proponents that would be implemented during development.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not create a significant hazard to the public or the environment through the routine transport, storage, use, or disposal of hazardous materials because future development would be required to comply with the mandatory existing laws and regulations that govern the transport, storage, use, and disposal of hazardous materials. Impacts would be less than significant.

Threshold 2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact Analysis

As discussed under Threshold 1, there are numerous hazardous materials and hazardous waste laws and regulations that apply to development projects within the proposed PMPU area. Specifically, the DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 173 (Packaging Requirements), 177 (Highway Transportation), 178 (Packaging Specifications), and 180 (Packaging Maintenance) would reduce impacts associated with transportation of hazardous materials. The SPCC plan (40 CFR 112.7) enforced by County DEH would reduce impacts associated with spills of fuel or oil to navigable waters. OSHA would reduce impacts related to workers' exposure to hazardous materials at the workplace. Title 8 and Title 22 of the CCR would reduce potential impacts related to the handling of hazardous materials and management of hazardous materials facilities, as well as the testing, abatement, and disposal of ACMs and LBP. For detailed explanations of the applicable regulations, see Section 4.7.3 above.

Construction

The proposed PMPU serves as a long-term planning blueprint for future development within the proposed PMPU area. Future development currently anticipated in the planned improvements or each planning district's Vision, as well as development consistent with the water or land use designation for a proposed development site, as described in Table 3-2, may occur. The construction of future development, in the absence of regulatory oversight, has the potential to result in upset or accident conditions involving the release of hazardous materials during the use or transport of such materials (also analyzed in Threshold 1), or to encounter contaminated soil, groundwater, and/or sediment, and result in upset or accident conditions involving the release of these hazardous materials (also analyzed in Threshold 4 below). As such, an analysis of the potential construction impacts from future development and from the implementation of the proposed policies and planning district standards is provided below.

Encountering Existing Contaminated Material

The HMTS (Appendix G) prepared for the proposed PMPU provides a review of the environmental database search conducted by EDR, which included Federal, State, and local environmental databases that identify and provide status updates on sites that contain or have released contaminants into the soil, sediments, or groundwater. The environmental database search encompassed a 1/16-mile radius of the proposed PMPU area to identify unauthorized releases to

soil, sediment, and/or groundwater on or adjacent to each planning district. The search radius was determined in order to identify the cases within the proposed PMPU area as well as offsite properties that would have the greatest potential impact on the planning districts at this programmatic level of analysis (i.e., within 1/16 mile or 330 feet of the boundary of the planning districts). This does not preclude the possibility for cases outside of the database search radius to potentially impact a future project within the proposed PMPU area. However, these additional sites would be evaluated during project-specific environmental review. As discussed in Section 4.7.2.2, *Known Contamination within the PMPU Planning Area*, PD1 through PD4 currently have open cases either undergoing investigation or requiring further evaluation (i.e., cases identified as “needs evaluation”). The presence of open cases in each of these planning districts indicates that hazardous materials may be on site, and it is possible future projects could encounter contaminated soil, groundwater, and/or sediment. Note that because there are no open cases present within PD7, PD8, PD9, or PD10, these planning districts are not specifically discussed further in the analysis of known existing contaminated materials for this threshold. Closed cases were also identified throughout the proposed PMPU area, which had been closed by the overseeing agencies when remediation was deemed complete. These closed cases are discussed under *Encountering Undocumented Contaminated Media* below. Further discussion regarding the potential to encounter previously unidentified contaminated media can be found in that subsection.

Future development consistent with the proposed water and land uses in PD1, PD2, PD3, and PD4 could result in soil, sediment, and/or ground and sediment disturbance that would have the potential to encounter the known contamination areas. Furthermore, future development may be planned adjacent or close to areas of known contamination, and may be close enough to have the potential to encounter suspected soil, water, or sediment contamination. Proposed PMPU policies would prevent the degradation of sediment and minimize exposure of adjacent communities to fill, soil, and sediment-based environmental contamination, and would require development to abate contamination in the Bay and along the shoreline to prevent further degradation of habitat or water quality due to historic or current contamination. As such, these policies would avoid or reduce impacts associated with the exposure or release of hazardous materials to the public or the environment by ensuring any contaminated sediment encountered during development would be remediated, removed, or otherwise stabilized under the oversight of RWQCB.

In addition to these proposed PMPU policies, the existing regulatory framework would provide requirements and measures to prevent accidental release of contaminated media, and protocols in the event of an accidental release. The DTSC, RWQCB, and County DEH are the regulatory agencies that oversee the management and cleanup of sites identified as containing hazardous materials that could impact environmental or public health should those materials be released through upset or accident conditions. The DTSC, under Cal/EPA, oversees the evaluation and abatement of contaminated properties, and regulates the activities of hazardous waste facilities. The San Diego RWQCB is authorized to operate the Site Cleanup Program (SCP) by Division 7 of the California Water Code. The San Diego RWQCB’s SCP regulates investigation and cleanup of polluted sites where recent or historic releases of hazardous materials have occurred. The County DEH oversees UST facilities, including UST releases, as well as operates the VAP, which provides review and approval of projects on properties contaminated with hazardous substances. Additionally, the County DEH manages the Site Assessment and Mitigation (SAM) Program, which provides oversight of all assessment and cleanups in San Diego County in accordance with the California Health and Safety Code.

However, due to the programmatic nature of the proposed PMPU, site-specific conditions are not known at this time and historical contamination could have migrated or changed, or existing sites may require further evaluation once future projects are proposed. Generally, properties with open unauthorized release cases within 300 feet have the greatest potential to adversely impact a site via groundwater. Sites with soil vapor contamination due to a petroleum plume or chlorinated hydrocarbon plume would have the greatest potential to adversely impact a site within approximately 30 feet and 100 feet, respectively. In addition, there is the potential of accidental spill or release when handling of contaminated media during excavation, removal, or remediation. Therefore, future projects involving ground disturbance could encounter hazardous materials, the handling of which could result in an accidental release of contamination. Consequently, the disturbance of contaminated soils, groundwater, and/or sediment during the construction or operation of future development could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Thus, impacts are considered significant (**Impact-HAZ-1**), and mitigation is proposed to ensure that ground-disturbing activities for future development would not encounter contaminated media and potentially result in the release of hazardous materials.

It should be noted that all future development projects would be required to undergo project review for CEQA compliance prior to their approval and construction. As part of the project review, any future development projects that include ground-disturbing activities within 300 feet of a known open case or documented contamination plume, or 150 feet from a closed case listed above, included in the HMTS, or documented since on a hazardous materials database, would be required to implement **MM-HAZ-1**. Mitigation measure **MM-HAZ-1** would apply to open cases or documented contamination plumes within 300 feet because these are the cases that have the greatest potential to adversely impact a site via groundwater. A large release could occur over 300 feet from the future development project site, but the documented contamination plume could migrate to within 300 feet of the site, and adversely impact groundwater at the site. Additionally, standard industry practice for cases involving soil vapor uses a vapor encroachment screening matrix search distance test that specifies a distance of 30 feet from the edge of a petroleum plume and 100 feet from the edge of a chlorinated hydrocarbon plume. Both of these release types would be covered using the 300-foot distance for open cases and 150-foot distance for closed cases. Mitigation measure **MM-HAZ-1** would require a future project proponent to conduct site-specific due diligence through the completion of a desktop investigation and/or the preparation of a Phase I Environmental Site Assessment (ESA), and if recommended by the Phase I ESA, a Phase II ESA. In addition, for future development projects on properties with documented or suspected (based on historic uses of the site) soil, groundwater, and/or sediment contamination that would involve soil excavation, grading, or other subsurface disturbance, preparation and implementation of a soil, groundwater, and/or sediment management plan would be required. If previous remediation activities have occurred on the site, this would be taken into consideration when preparing the soil, groundwater, and/or sediment management plan. Additionally, if excess soil is generated as a result of excavation or grading for future PMPU-related development, the soil would require chemical characterization to determine the presence and/or extent of contamination by a qualified environmental professional prior to reuse, export, or disposal. If excavated soil is determined to be appropriate for reuse, it may be reused onsite or transported to another site for reuse. If soils are identified for disposal, they must be disposed of at a landfill or facility permitted to accept hazardous waste or materials.

Moreover, future development at the TAMT within PD4 that is consistent with the TAMT Redevelopment Plan, the environmental effects of which were analyzed, and their significance determined, in the TAMT EIR would still be required to implement the Mitigation Monitoring and Reporting Program (MMRP) associated with the TAMT EIR.

With the implementation of mitigation, the potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be minimized, and the related impact would be reduced to a less-than-significant level.

Encountering Undocumented Hazardous Materials

Many future projects that may be constructed under the proposed PMPU would result in ground-disturbing construction activities. Given the potential contamination from historical uses, which include past industrial and commercial uses as well as dumping sites, these ground-disturbing activities could occur in areas where there are no known open cases but contaminated media may be present nonetheless. As such, undocumented contaminated media could be disturbed or brought to the surface and could create a significant hazard to the public or the environment through reasonably foreseeable upset and accidental conditions involving the release of potentially hazardous materials.

The DTSC, RWQCB, and County DEH must be consulted if previously unknown contaminants are encountered. The San Diego RWQCB's SCP regulates investigation and cleanup of polluted sites where recent or historic releases of hazardous materials have occurred. The County DEH oversees UST facilities, including UST releases, as well as operates the VAP, which provides review and approval of projects on properties contaminated with hazardous substances. The County DEH also manages the SAM Program, which provides oversight of all assessment and cleanups in San Diego County in accordance with the California Health and Safety Code. Additionally, all workers on site exposed to hazardous substances must be trained according to OSHA standards, specifically Standard 1910 Subpart H, 1910.120I(1).

Proposed PMPU ECO Policy 2.2.3 and ECO Policy 2.3.3 have the potential to reduce impacts related to contaminated media that create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions. However, due to the general nature of these policies, they do not ensure that a significant impact would be avoided.

Future development that would occur consistent with the proposed PMPU may encounter contaminated media during construction that is presently not documented on a database or record search, and therefore was not anticipated. Unknowingly disturbing the contaminated soil, groundwater, or sediment would potentially result in an upset and accident condition involving the release of hazardous materials into the environment. Therefore, impacts are considered significant (**Impact-HAZ-2**). As such, mitigation is proposed to ensure that any historic or previously undiscovered and/or unknown contamination encountered during reasonably foreseeable construction activities is identified so that it may be properly handled, managed, and disposed of in accordance with existing local, State, and Federal regulations and laws (**MM-HAZ-1** and **MM-HAZ-2**).

Encountering Asbestos-Containing Materials, Polychlorinated Biphenyls, Lead-Based Paint, and Organochlorine Pesticides

Future development associated with the proposed PMPU may require the demolition of structures or buildings built before 1980. Such buildings were often constructed with ACMs, asbestos-containing construction materials (ACCMs), and lead-containing surfaces (i.e., LBP). The demolition of such buildings could release these materials to the air or environment and result in adverse effects if proper measures are not implemented. However, demolition or grading activities would be required to comply with CCR Title 8, Industrial Relations, which provides specific requirements for removal and disposal of ACM, and lead-containing surfaces. These requirements include preconstruction surveys for the presence of ACMs and lead-containing surfaces that would need to be conducted by California Department of Public Health Certified Lead Inspector/Assessors and California Division of Occupational Safety and Health Certified Asbestos Consultants. As such, compliance would ensure that removal of any ACM and/or lead-containing surfaces would be conducted in a safe manner, including proper disposal in an approved facility. Therefore, impacts are considered less than significant related to ACM and lead-containing surfaces.

Fluorescent lighting ballasts manufactured prior to 1978, and electrical transformers, capacitors, and generators manufactured prior to 1977, may contain PCBs, which were also found in other products such as caulking, paint, and adhesives from approximately 1950 to 1979. They are human-made organic chemicals that have been demonstrated to cause a variety of adverse health effects. In accordance with the Toxic Substances Control Act (15 USC 2601 et seq.) and other Federal and State regulations, future project proponents would be required to properly handle and dispose of electrical equipment (electric transformers, capacitors, and generators), PCB-containing building materials such as paint and caulking, and lighting ballasts that contain PCBs, ensuring that impacts would be less than significant.

In addition to the presence of lead in the buildings themselves, lead can also be present in the soil surrounding the building. Concentrations of lead in the soil can be above acceptable levels at the dripline (the edge of the roof where rain water might drip off) of an older structure (pre-1980s) because lead used in building materials or paint may have leached from paint and other substances and contaminated the soil surrounding the structure. In addition, organochlorine pesticides, often used historically as termiticides for wooden structures, may be present in the soil surrounding existing or historic structures. Hazardous materials could be encountered in the soil during ground-disturbing construction activities at the location of older structures currently or formerly present on the development site, and potentially released into the environment. Therefore, impacts are considered significant (**Impact-HAZ-3**). As such, mitigation is required to ensure that any lead- or pesticide-contaminated soils are not released into the environment during future PMPU-related construction activities (**MM-HAZ-1** and **MM-HAZ-2**). These mitigation measures apply to any soil disturbance within the immediate area of a building built prior to 1980.

Construction Impact Analysis Summary

Open cases currently undergoing investigation or requiring further evaluation are present in PD1, PD2, PD3, and PD4. These ongoing investigations are evaluating and remediating primarily historic and current contaminated sediments on the Bay floor, and impacted soils and groundwater due to releases of contaminants (primarily gasoline, diesel, other fuels, and heavy metals) to the ground surface landside. Future development consistent with the proposed PMPU, as described in Table 3-2, may occur. The presence of contaminated media in PD1, PD2, PD3, and PD4 in areas that may

experience soil, sediment, or groundwater disturbance during reasonably foreseeable project construction could expose workers, the public, or the environment to unsafe levels of contaminants. (**Impact-HAZ-1**). The remaining planning districts do not have documented sites currently undergoing remediation or investigation and, therefore, would have a reduced risk of encountering contaminated material during construction (see **Impact-HAZ-2** below). Future development that would disturb known or suspected impacted soils, groundwater, or sediment would be required to conduct further evaluation to characterize the contaminants and their potential extent, and to develop management plans to appropriately handle and dispose of any contaminated media in accordance with local, State, and Federal regulations (**MM-HAZ-1**).

In addition, due to the historic uses of the Bay, it is possible previously undiscovered soil, groundwater, or sediment contamination could be encountered during future project construction throughout the proposed PMPU area and be released into the environment (**Impact-HAZ-2**). To address the potential of encountering previously undiscovered contamination, future development involving earthwork would be required to prepare an environmental site assessment (**MM-HAZ-1**). Additionally, if previously unknown hazardous materials are discovered during construction or ground-disturbing activities, **MM-HAZ-2** would be implemented, which would entail immediate stoppage of work and retaining an environmental professional to characterize the hazardous materials. If hazardous materials are identified, **MM-HAZ-1** would be implemented.

Ground-disturbing construction may also encounter soil contaminated with lead or organochlorine pesticides (**Impact-HAZ-3**). In order to reduce potential impacts related to the accidental release of lead-contaminated soil or organochlorine pesticide-contaminated soil to the environment, any future development involving soil disturbance within the immediate area of a building built prior to 1980 would be required to prepare an environmental site assessment to investigate potential contamination (**MM-HAZ-1**). If undocumented hazardous material associated with buildings built prior to 1980 is discovered during construction activities, **MM-HAZ-2** would be implemented to minimize potential risk to workers, the public, and the environment.

For the reasons discussed above, implementation of **MM-HAZ-1** and **MM-HAZ-2** would reduce potentially significant impacts related to creating a significant hazard to the public or environment due to accidental upset involving the release of hazardous materials to less-than-significant levels.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, could result in significant impacts related to the exposure of people or the environment to hazardous conditions due to the potential for ground-disturbing activities to release contaminated soil, groundwater, or sediment (**Impact-HAZ-1**, **Impact-HAZ-2**, and **Impact-HAZ-3**). These significant impacts would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with the new Waterfront Destination Park would involve ground-disturbing activities that could encounter contaminated soil or groundwater and could release hazardous materials. Therefore, it is concluded that significant impacts associated with the release of hazardous materials to the environment as a result of ground-disturbing construction activities could occur due to Option 1 (**Impact-HAZ-1, Impact-HAZ-2, and Impact-HAZ-3**). However, construction of Option 1 would not result in any additional or more severe impacts related to the release of hazardous materials into the environment than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, could result in significant impacts related to the exposure of people or the environment to hazardous conditions due to the potential for ground-disturbing activities to release contaminated soil, groundwater, or sediment (**Impact-HAZ-1, Impact-HAZ-2, and Impact-HAZ-3**). These significant impacts would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with the expanded Lane Field Setback Park would involve ground-disturbing activities that could encounter contaminated soil or groundwater and could release hazardous materials. Therefore, it is concluded that significant impacts associated with the release of hazardous materials to the environment as a result of ground-disturbing construction activities could occur due to Option 2 (**Impact-HAZ-1, Impact-HAZ-2, and Impact-HAZ-3**). However, construction of Option 2 would not result in any additional or more severe impacts related to the release of hazardous materials into the environment than buildout without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, could result in significant impacts related to the exposure of people or the environment to hazardous conditions due to the potential for ground-disturbing activities to release contaminated soil, groundwater, or sediment (**Impact-HAZ-1, Impact-HAZ-2, and Impact-HAZ-3**). These significant impacts would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with the new park space that could be developed under Option 3 would involve ground-disturbing activities that could encounter contaminated soil or groundwater and could release hazardous materials. Therefore, it is concluded that significant impacts associated with the release of hazardous materials to the environment as a result of ground-disturbing construction activities could occur due to Option 3 (**Impact-HAZ-1, Impact-HAZ-2, and Impact-HAZ-3**). However, construction of Option 3 would not result in any additional or more severe impacts related to the release of hazardous materials into the environment.

Operation

Operation of future PMPU-related development is not expected to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Implementation of the proposed PMPU

would increase operational activities in all planning districts in the PMPU area because the PMPU would allow for the expansion of existing uses, as well as the establishment of new commercial, maritime, and recreational water and land uses. The changes in water and land uses and associated development could result in an increased use of common hazardous materials, such as cleaners, solvents, fuels, oils, or lubricants, for normal cleaning and maintenance activities of facilities, equipment, vessels, and vehicles.

The continued operation of the marine terminal and other industrial facilities in PD4 would entail the use, storage, and transport of hazardous materials, including but not limited to oil, fuel, and other types of liquid bulk cargo. The storage of fuel, oil, and other hazardous materials would continue to comply with Federal, State, and local regulations, including the specific regulations that require onsite facilities to implement spill prevention measures, and prepare a Risk Management Plan and Hazardous Materials Business Plan (discussed in Threshold 1). Additionally, all hazardous materials would be required to be used in accordance with applicable regulations, such as the RCRA, DOT Hazardous Materials Regulations, CERCLA, CWA, DTSC regulations, and the local CUPA regulations, as summarized in Section 4.7.3 above. Hazardous waste would be disposed of in accordance with all applicable laws and regulations enforced by the local enforcement agency, and the potential to create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions from the release of hazardous materials into the environment would be minimized.

The proposed PMPU would allow for additional recreational boat berthing and commercial fishing berthing slips, as well as the redevelopment of existing marinas. The accidental release or spill of fuel could occur at marinas, especially during fueling of vessels. Marinas that meet the criteria must prepare a SPCC plan (40 CFR 112.7) to address oil spill prevention procedures including secondary containment of oil product vessels, and procedures to be taken in the event of an accidental spill. The EPA has established requirements to report oil spills or discharge in accordance with the CWA. Oil spills that may violate applicable water quality standards, cause a film or sheen upon the surface of the water or shoreline, or cause a sludge or emulsion to deposit beneath the surface of the water or shoreline must be reported to the USCG National Response Center and EPA (40 CFR 110). The CWA (Section 312(a)-(m)) also regulates vessel sewage discharge. It is illegal to dump untreated sewage on inland waters and within 3 miles of shore, and within No Discharge Zones, established by the State (40 CFR 140). Accidental discharge of sewage must also be reported to the USCG National Response Center.

Therefore, compliance with existing laws and regulations would minimize the potential for operation of future PMPU-related development to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials to the environment. Impacts would be less than significant, and no mitigation is required.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with upset or accidental conditions related to the release of hazardous materials.

Operational activities associated with the new Waterfront Destination Park may involve the periodic use of hazardous materials typically used for cleaning and maintenance, such as cleaners, solvents, fuels, oils, or lubricants. Option 1 would not include the storage of hazardous materials as it would be a recreational space. These materials are regulated by existing regulations including RCRA, DOT Hazardous Materials, CERCLA, CWA, DTSC, and local CUPA regulations. Compliance with these regulations would ensure the safe handling of hazardous materials during operational activities. Thus, operation of Option 1 would not result in any additional impacts related to upset or accidental conditions associated with the release of hazardous materials than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with upset or accidental conditions related to the release of hazardous materials.

Operational activities associated with the expanded Lane Field Setback Park may involve the periodic use of hazardous materials typically used for cleaning and maintenance, such as cleaners, solvents, fuels, oils, or lubricants. Option 2 would not include the storage of hazardous materials as it would be a recreational space. These materials are regulated by existing regulations including RCRA, DOT Hazardous Materials, CERCLA, CWA, DTSC, and local CUPA regulations. Compliance with these regulations would ensure the safe handling of hazardous materials during operational activities. Thus, operation of Option 2 would not result in any additional impacts related to upset or accidental conditions associated with the release of hazardous materials than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with upset or accidental conditions related to the release of hazardous materials.

Operational activities associated with the new park space that may be developed under Option 3 may involve the periodic use of hazardous materials typically used for cleaning and maintenance, such as cleaners, solvents, fuels, oils, or lubricants. Option 3 would not include the storage of hazardous materials as it would be a recreational space. These materials are regulated by existing regulations including RCRA, DOT Hazardous Materials, CERCLA, CWA, DTSC, and local CUPA regulations. Compliance with these regulations would ensure the safe handling of hazardous materials during operational activities. Thus, operation of Option 3 would not result in any additional impacts related to upset or accidental conditions associated with the release of hazardous materials than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

None of the proposed PMPU Element policies identified above in Section 4.7.4.3 would result in impacts related to the potential release of hazardous materials during routine use, transport, and disposal. Furthermore, proposed PMPU policies would include the implementation of District programs and measures to prevent pollution from construction and operations of projects in the proposed PMPU area, and minimize the exposure of the environment and the public to contamination.

Impact Determination and Mitigation

Implementation of the proposed PMPU would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials to the environment.

Significant Impacts

Impact-HAZ-1: Possible Onsite Contamination. Environmental database searches indicate properties with historic and ongoing investigation and remediation of contaminated soil, groundwater, and/or sediment may be encountered during construction activities in certain areas of PD1, PD2, PD3, and PD4. Construction activities with soil, sediment, or groundwater disturbance within 300 feet of a known open case or documented contaminant plume, or 150 feet from a closed case, either listed in the HMTS or documented since on a hazardous materials database, would potentially result in the accidental upset or release of hazardous materials and create a potentially significant hazard to workers, the public, and the environment. Impacts are therefore considered significant.

Impact-HAZ-2: Potential to Encounter Undocumented Contamination During Reasonably Foreseeable Construction Activities. Due to the historic uses within and adjacent to the proposed PMPU area, it is possible previously undiscovered contaminated soil, groundwater, and/or sediment may be present. Ground-disturbing activities at these sites could result in the accidental exposure of hazardous materials to workers, or the accidental release or spill of hazardous materials to the environment. Therefore, disturbance of undocumented contamination would have the potential to result in reasonably foreseeable upset and accident conditions involving the release of hazardous materials to the environment. Impacts are therefore considered significant.

Impact-HAZ-3: Potential to Encounter Lead or Organochlorine Pesticides in Soil During Reasonably Foreseeable Construction Activities. Concentrations of lead in the soil may be above acceptable levels at sites either containing or formerly containing structures built prior to 1980 as a result of lead used in building materials or paint that may have leached from the structure into the soils. In addition, organochlorine pesticides, often used historically as termiticides for wooden structures, may be present in the soil surrounding existing or former structures. Impacts are therefore considered significant.

Mitigation Measures

For **Impact-HAZ-1:**

MM-HAZ-1: Conduct an Environmental Site Assessment, Prepare a Remediation Plan, and Remediate Accordingly. This mitigation measure applies to future development that includes

ground-disturbing activities and are located within 300 feet of a known open hazardous materials case or documented contaminant plume, or 150 feet from a closed case. During the preparation of a site-specific environmental review and before the District approves the future development project, the project proponent shall retain a licensed, qualified, and experienced Environmental Professional, approved by the District, who shall conduct or directly oversee the preparation and implementation of the site assessment and remediation plans specified below. The Environmental Professional shall be a California-licensed Professional Geologist or Professional Engineer with more than 3 years of experience conducting hazardous materials environmental assessments, consistent with the definition of an environmental professional according to ASTM E1527-13 (Standard Practice for ESAs: Phase I ESA Process). For A.1. below, qualified District staff, with at least 3 years of experience interpreting and conducting hazardous materials desktop investigations consisting of environmental database searches, historical site use archival research, and environmental review of available aerial and site photography, may conduct the Desktop Investigation. Environmental site assessments, including the preparation of testing and remediation plans, shall include one or more of the following steps. Every assessment type mentioned below may not be required for each future development project, depending on onsite conditions and proposed elements of the development projects. The District shall determine which of the following site assessment and/or plans will be required for a future development project.

A. Steps for Land Disturbance Activities

1. **Desktop Investigation.** The project proponent shall either submit to the District for review and approval, or the District shall prepare, a desktop-based investigation (e.g., hazardous materials technical study, hazardous materials database review, or review of other similar reference documents) to evaluate the likelihood of contaminated soils, sediments, and/or groundwater to be present within or adjacent to the future project site, due to historic uses on or near the project site, or past or present investigations or remediations that have occurred on adjacent or nearby properties that have the potential to affect development on the project site. The desktop investigation shall be performed by an Environmental Professional and reviewed and approved by the District or may be performed by qualified District staff with at least 3 years of experience interpreting and conducting hazardous materials desktop investigations consisting of database searches, historical site use archival research, and review of available aerial and site photography. The investigation shall consider the potential presence of structures or former structures on the site built prior to 1980, and shall determine if a potential for lead and organochlorine pesticides may be present in the soil at the project site due to proximity to a structure built prior to 1980. The desktop investigation shall include, at a minimum, a summary of the history of the project site, the current conditions on the project site, and a review of available documentation regarding previous evaluation(s) of the site. The desktop review shall take into account the site conditions and features of the project, including the location, depth, and quantity of soil disturbance resulting from construction of the project, the historic uses and former or existing buildings on the project site, the presence of former or current monitoring or investigation on the project site, past abatement and/or remediation of contaminants at the project site, whether the site has been previously graded, and the condition of existing site facilities on the project site. If the results of the desktop investigation indicate the potential for contamination to exist on site or adjacent to the

site, further investigation and site planning would be required, and the project proponent shall perform one or more of the following steps, as determined by the District.

2. **Prepare Phase I ESA.** The Environmental Professional, shall, at the project proponent's expense, prepare a Phase I ESA in accordance with the standard of care at that time (currently the ASTM Standard Practice E1527-13) and applicable regulations (currently the EPA's "Standards and Practices for All Appropriate Inquiries [40 CFR 312]") and submit the Phase I ESA to the District for its review and approval.
3. **Prepare Phase II ESA.** In the event the findings of the Phase I ESA recommend further evaluation through a Phase II ESA, the Environmental Professional, shall, at the project proponent's expense, prepare a Phase II ESA to adequately evaluate the project area for the presence of contaminants of potential concern (COPCs), as indicated by the Phase I ESA. Sites with cases under regulatory oversight shall coordinate with the appropriate oversight agency (e.g., SWRCB, DTSC, USACE, or other) and the District prior to commencement of the Phase II ESA. The Environmental Professional shall prepare a Phase II work plan, which shall describe sampling and testing methodology that shall be followed while conducting the Phase II ESA. The Phase II work plan shall be submitted to and reviewed and approved by the oversight agency and/or the District. The Phase II ESA shall also include a review of any available existing documentation of previous ESAs, UST removal sampling data, remediation, or other assessments of the project site. Results of previous assessments and results of onsite testing shall be reported in the Phase II ESA, which shall be submitted to the District and oversight agency (if applicable) for review and approval.
4. **Prepare Soil and/or Groundwater Management Plan.** The project proponent for future development of impacted or potentially impacted properties (as determined by the Phase I and II ESAs) involving ground-disturbing activities, such as, but not limited to, soil excavation, demolition, grading, or other subsurface disturbance, shall be required to prepare and implement a Soil and/or Groundwater Management Plan (Management Plan) that addresses soil and groundwater (as applicable). The plan shall be prepared by the Environmental Professional, and be implemented during ground-disturbing activities under the oversight of the Environmental Professional. The plan, at a minimum, shall address (1) monitoring of excavated soil or other ground-disturbing activities; (2) community and worker health and safety; (3) soil and groundwater handling, stockpiling, characterization, onsite reuse, export, and disposal protocols; (4) permitting; (5) notifications; (6) contingency plans for encountering unanticipated contamination; and (7) reporting. Appropriate references of the potential to encounter contaminated soils and/or groundwater shall be included in construction specifications and bid documents so various environmental factors (e.g., construction dewatering, soil disposal) and worker and community health and safety are appropriately and cost-effectively planned for and managed by the contractor. The Management Plan shall be submitted to the District for review and approval during the project's site-specific environmental review. After the District's review and approval, the project proponent shall implement the Management Plan as a condition of approval of the project.
 - a. **When Dewatering is Proposed/Required.** When dewatering is proposed/required during construction that may generate contaminated groundwater, the Management Plan shall include additional measures applicable to

dewatering activities. If dewatering is expected during construction, the project proponent shall obtain a NPDES permit from the RWQCB, or *Discharge Permit* or a *Batch Discharge Authorization* from the Cities of Coronado, Imperial Beach, or San Diego prior to commencing construction activities. The project proponent shall comply with the requirements of the discharge permit; and if the discharge water is contaminated, these requirements may include characterization of the water to be discharged and pretreatment of groundwater prior to discharge. The project proponent shall coordinate with the RWQCB and any other agency providing oversight of wastewater discharge for the project site, to ensure consistency between all applicable requirements for discharge pertaining to the property (i.e., existing NPDES permit, etc.). All requirements and measures regarding the dewatering process shall be included in the Management Plan. The Management Plan shall be submitted for the District's review and approval. After the District has reviewed and approved the Management Plan, it shall be implemented by the project proponent as a condition of approval of the project.

- b. **Prepare Site Health and Safety Plan.** The Management Plan shall include a Site Health and Safety Plan to reduce potential health and safety hazards to workers and the public. The Site Health and Safety Plan shall require compliance with 29 CFR Part 120, Hazardous Waste Operations and Emergency Response regulations for site workers at uncontrolled hazardous waste sites. The Site Health and Safety Plan shall be based on the due diligence completed for the site (Phase I ESA and Phase II ESA) and the planned site construction activity to ensure that site workers potentially exposed to site contamination in soil and groundwater have the proper training, equipment, and hazard monitoring action levels during site activity. The Site Health and Safety Plan shall be submitted to the District for review and approval during the project's environmental review and implemented under the oversight of a Certified Industrial Hygienist, retained by the project proponent as a mitigation measure and/or condition of approval of the project. The project proponent along with its contractors shall implement the training, equipment, and monitoring activities outlined in the Health and Safety Plan to ensure that workers are not exposed to contaminants above permissible exposure limits established by Table Z, 29 CFR Part 1910.1000.

B. Steps for Bay Sediment Disturbance Due Diligence

1. **Prepare Sediment Management Plan.** The project proponent for future development of impacted or potentially impacted properties (as determined by the Phase I and II ESAs) involving sediment-disturbing activities, such as, but not limited to, dredging, excavation, pile removal, pile installation, or other subsurface disturbance, shall be required to obtain and implement a management plan that addresses sediment ("Sediment Management Plan"). The Sediment Management Plan shall be prepared by a California-licensed Professional Geologist, Professional Engineering Geologist, or Professional Engineer, retained by the project proponent. The Sediment Management Plan, at a minimum, shall address (1) monitoring of dredging, excavation, or other sediment-disturbing activities; (2) community and worker health and safety; and (3) sediment handling, stockpiling, characterization, onsite reuse, export, and disposal protocols. The Sediment Management Plan shall describe in detail the methods to be employed to minimize disturbance of contaminated sediment during waterside

construction activities and the monitoring that will occur during construction activities. Appropriate references to the potential to encounter contaminated sediment shall be included in construction specifications and bid documents so that the contractor can ensure various environmental factors (e.g., sediment disposal) are appropriately and cost-effectively managed by the contractor. The Sediment Management Plan shall be submitted to the District for review and approval. After the District's review and approval, the project proponent shall implement the Sediment Management Plan as a condition of approval of the project.

For **Impact-HAZ-2**:

Implement **MM-HAZ-1**, as described above.

MM-HAZ-2: Identify Unknown Hazardous Materials Encountered During Construction. If, during ground-disturbing construction activities, the project proponent or its contractors encounter indications of potential contamination, including but not limited to discoloration of the soil, a sheen on the surface of groundwater, or an odor, the project proponent or contractor shall halt work in the vicinity of the potential contamination. Before the project proponent resumes work, the project proponent shall retain an Environmental Professional, approved by the District, to characterize the potential contamination. If the Environmental Professional determines that the potential contamination is a hazardous material, the Environmental Professional shall prepare a Management Plan and a Health and Safety Plan (as described in **MM-HAZ-1**) for the project site. The project proponent shall submit the Management Plan and the Health and Safety Plan to the District for review and approval. The project proponent shall implement the approved Management Plan and Health and Safety Plan prior to and throughout the remainder of construction activities. Additionally, if the substance encountered is determined to be a hazardous material, the project proponent shall notify the County DEH, and shall comply with any additional requirements of the County DEH.

For **Impact-HAZ-3**:

Implement **MM-HAZ-1** and **MM-HAZ-2**, as described above.

Level of Significance After Mitigation

In order to address the presence of known or suspected onsite contamination (**Impact-HAZ-1**), an ESA shall be conducted for future projects with known or suspected onsite contamination to evaluate potential environmental concerns associated with hazardous materials (**MM-HAZ-1**). One or more steps of the ESA may be required by the District, including a desktop investigation, a Phase I ESA, and/or a Phase II ESA (the latter of which would be based on the recommendations of the Phase I ESA). The Phase II ESA may recommend remediation activities prior to construction of project construction, which shall be conducted by a qualified Environmental Professional. Based on the findings of the Phase II ESA, a future project located on a property with known or suspected contamination shall prepare and implement a Management Plan to ensure the proper handling of potentially contaminated media. The Management Plan shall include a Site Health and Safety Plan, which would ensure the safety of the workers and the public.

To address the potential of encountering previously undiscovered contamination (**Impact-HAZ-2**), an ESA shall be performed to evaluate the likelihood of contaminated soils, sediments, and/or groundwater to be present within or adjacent to the future project site, based on historic uses at or

adjacent to the site (**MM-HAZ-1**). Furthermore, assessment by a qualified Environmental Professional is required if discolored soil or other potential environmental issues are encountered during ground-disturbing construction activities (**MM-HAZ-2**). If the Environmental Professional determines that the potential contamination is a hazardous material, **MM-HAZ-1** shall be implemented. The implementation of site-specific evaluation, and excavation and/or soil monitoring if determined to be necessary, as required by **MM-HAZ-1**, would reduce the potential impact resulting from the unexpected encounter of previously undocumented contamination.

In order to reduce potential impacts related to the accidental release of lead-contaminated soil or organochlorine pesticide-contaminated soil to the environment due to the presence of a structure built prior to 1980 (**Impact-HAZ-3**), any future project involving soil disturbance within the immediate area of a building built prior to 1980 will be required to prepare an ESA to investigate potential contamination (**MM-HAZ-1**).

With implementation of **MM-HAZ-1** and **MM-HAZ-2**, impacts related to the potential creation of a significant hazard to workers, the public, or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (**Impact-HAZ-1** through **Impact-HAZ-3**) would be less than significant because safeguards would be taken to ensure upset and accident conditions do not occur. Operational impacts would be less than significant because of existing regulations and regulatory agency oversight.

Threshold 3: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact Analysis

Construction

As described in Section 4.7.2.3, *Existing Schools Within 0.25 Mile of the Proposed PMPU Area*, there are no schools within the PMPU area, but there are four within 0.25 mile of the proposed PMPU area. Table 4.7-2 identifies the school districts and schools within 0.25 mile of the proposed PMPU area, and presents the distance and direction to the specific planning districts within 0.25 mile.

Future development currently anticipated in the planned improvements or each planning district's Vision, as well as development consistent with the water or land use designation for the proposed development site, as described in Table 3-2, may occur. The construction of future development may require the temporary use of standard hazardous materials used for construction, including fuels, oils, solvents, paints, lubricants, and paving materials. As described under Threshold 1, these hazardous materials would be used in compliance with applicable Federal, State, and local regulations, which would ensure the safe handling of hazardous materials and reduce risks related to these hazardous materials. The transport, use, and disposal of construction-related hazardous materials would be required to comply with regulations, as described above, such as the RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; and California Labor Code Division 5, Parts 1 and 7. Also, their transport, use, and disposal would be subject to regulatory agency oversight and inspection, including by the applicable fire departments (storage) and County DEH. Further, potential releases of hazardous substances during construction would be addressed

through the EPCRA, which is administered in California by the SERC, the Hazardous Material Release Response Plans and Inventory Law, and the California Hazardous Waste Control Law, which would govern proper containment, spill control, and disposal of hazardous waste generated during construction. Construction BMPs would be implemented as part of a SWPPP as required by the statewide NPDES General Permit for Construction Activities. Required construction BMPs are designed to reduce pollutant discharges and control stormwater and other runoff during construction, and provide controls for the proper storage and disposal of hazardous materials. Due to compliance and enforcement of the applicable regulations, impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the emitting hazardous emissions or handling hazardous or acutely hazardous materials within 0.25 mile of a school.

Construction activities associated with the new Waterfront Destination Park would involve the use of hazardous materials typically used for construction, including fuels, oils, solvents, paints, lubricants, and paving materials. However, the use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; and California Labor Code Division 5, Parts 1 and 7. Also, their transport, use, and disposal would be subject to regulatory agency oversight and inspection, including by the applicable fire departments (storage) and County DEH (CUPA). Further, potential releases of hazardous substances during construction would be addressed through the EPCRA, the Hazardous Material Release Response Plans and Inventory Law, and the California Hazardous Waste Control Law. Compliance with these regulations would ensure the safe handling of hazardous materials during construction. Thus, construction under Option 1 would not result in any additional impacts related to the use of hazardous materials within 0.25 mile of a school than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the emitting hazardous emissions or handling hazardous or acutely hazardous materials within 0.25 mile of a school.

Construction activities associated with the expanded Lane Field Setback Park would involve the use of hazardous materials typically used for construction, including fuels, oils, solvents, paints, lubricants, and paving materials. However, the use, transport, and disposal of these materials

are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; and California Labor Code Division 5, Parts 1 and 7. Also, their transport, use, and disposal would be subject to regulatory agency oversight and inspection, including by the applicable fire departments (storage) and County DEH (CUPA). Further, potential releases of hazardous substances during construction would be addressed through the EPCRA, the Hazardous Material Release Response Plans and Inventory Law, and the California Hazardous Waste Control Law. Compliance with these regulations would ensure the safe handling of hazardous materials during construction. Thus, construction under Option 2 would not result in any additional impacts related to the use of hazardous materials within 0.25 mile of a school than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the emitting hazardous emissions or handling hazardous or acutely hazardous materials within 0.25 mile of a school.

Construction activities associated with the new park space that could be developed under Option 3 would involve the use of hazardous materials typically used for construction, including fuels, oils, solvents, paints, lubricants, and paving materials. However, the use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; and California Labor Code Division 5, Parts 1 and 7. Also, their transport, use, and disposal would be subject to regulatory agency oversight and inspection, including by the applicable fire departments (storage) and County DEH (CUPA). Further, potential releases of hazardous substances during construction would be addressed through the EPCRA, the Hazardous Material Release Response Plans and Inventory Law, and the California Hazardous Waste Control Law. Compliance with these regulations would ensure the safe handling of hazardous materials during construction. Thus, construction under Option 3 would not result in any additional impacts related to the use of hazardous materials within 0.25 mile of a school than buildout of the proposed PMPU without Option 3.

Operation

The proposed water and land uses for the proposed PMPU area would not include uses that would emit or involve the handling of hazardous materials within 0.25-quarter mile of a school, such as power plants, manufacturing facilities, and factories. The proposed water and land uses would allow for the continued operation of maritime uses within the proposed PMPU area. These uses include shipping operations and ship building and vessel repair. These uses would not be expanded with the proposed water and land use designations, and would continue typical operations, which do not involve hazardous emissions. As described under Threshold 1, operation of these water and land uses would require the routine use of standard hazardous materials often used during operation, such as cleaners, solvents, fuels and oils for maintenance of vehicles, vessels, and other equipment and facilities. Operation of these proposed water and land uses would not include the routine use of acutely hazardous materials.

Implementation of the proposed PMPU is not anticipated to result in an increase in quantity or intensity of use, or expand the existing shipyards in PD4, which are physically built out. The continued operation of the shipyards would involve the use of hazardous materials for ship building activities, such as fuels, adhesives, and oils. The storage of fuel, oil, and other hazardous materials would continue to comply with Federal, State, and local regulations, including the specific regulations that require onsite facilities to implement spill prevention measures, and prepare a Risk Management Plan and Hazardous Materials Business Plan (discussed in Threshold 1). Additionally, all hazardous materials would be used in accordance with applicable regulations, such as RCRA regulations, DOT Hazardous Materials Regulations, and local CUPA regulations, as summarized in Section 4.7.3 above, which regulate the transportation, storage, and use of hazardous materials. Lastly, the proposed secondary uses are compatible with the primary uses in each planning district and do not propose any uses that would utilize hazardous materials. Therefore, operation of future development would not involve hazardous emissions or involve the handling of hazardous or acutely hazardous materials within 0.25 mile of a school due to the existing framework of regulations that would be applicable to the use and transportation of hazardous materials, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the emitting hazardous emissions or handling hazardous or acutely hazardous materials within 0.25 mile of a school.

Operational activities associated with the new Waterfront Destination Park may involve the periodic use of hazardous materials typically used for cleaning and maintenance, such as cleaners, solvents, fuels, oils, or lubricants. Option 1 would not include the storage of hazardous materials as it would be a recreational space. The use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; California Labor Code Division 5, Parts 1 and 7; and OSHA regulations (29 CFR 1910 Subpart H). Also, their transport, use, and disposal would be subject to regulatory agency oversight and inspection by County DEH (CUPA). Compliance with these regulations would ensure the safe handling of hazardous materials during operation. Thus, operation of Option 1 would not result in any additional impacts related to the use of hazardous materials within 0.25 mile of a school than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact

associated with the emitting hazardous emissions or handling hazardous or acutely hazardous materials within 0.25 mile of a school.

Operational activities associated with the expanded Lane Field Setback Park may involve the periodic use of hazardous materials typically used for cleaning and maintenance, such as cleaners, solvents, fuels, oils, or lubricants. Option 2 would not include the storage of hazardous materials as it would be a recreational space. The use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; California Labor Code Division 5, Parts 1 and 7; and OSHA regulations (29 CFR 1910 Subpart H). Also, their transport, use, and disposal would be subject to regulatory agency oversight and inspection by County DEH (CUPA). Compliance with these regulations would ensure the safe handling of hazardous materials during operation. Thus, operation of Option 2 would not result in any additional impacts related to the use of hazardous materials within 0.25 mile of a school than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the emitting hazardous emissions or handling hazardous or acutely hazardous materials within 0.25 mile of a school.

Operational activities associated with the new park space that could be developed under Option 3 may involve the periodic use of hazardous materials typically used for cleaning and maintenance, such as cleaners, solvents, fuels, oils, or lubricants. Option 3 would not include the storage of hazardous materials as it would be a recreational space. The use, transport, and disposal of these materials are regulated by existing regulations including RCRA (40 CFR Parts 260-299), DOT Hazardous Materials Regulations (49 CFR 100–185) Parts 107, 130, 172, 173, 177, 178, and 180; Title 8 and Title 22 of the CCR; California Labor Code Division 5, Parts 1 and 7; and OSHA regulations (29 CFR 1910 Subpart H). Also, their transport, use, and disposal would be subject to regulatory agency oversight and inspection by County DEH (CUPA). Compliance with these regulations would ensure the safe handling of hazardous materials during operation. Thus, operation of Option 3 would not result in any additional impacts related to the use of hazardous materials within 0.25 mile of a school than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

None of the proposed PMPU Element policies could result in impacts related to the potential release of hazardous materials during their routine use, transport, and disposal. Furthermore, proposed PMPU policies (noted in Section 4.7.4.3) would include the implementation of District programs and measures to prevent pollution from construction and operations of projects in the proposed PMPU area and minimize the exposure of the environment and the public to contamination.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result in a significant impact with respect to hazardous emissions or the handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. No mitigation is required.

Threshold 4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Impact Analysis

Construction

As discussed in Section 4.7.2, *Existing Conditions*, the HMTS prepared for the proposed project identified several sites within the proposed PMPU area where previous releases of hazardous materials occurred, and, in most instances, the subsequent remediation that took place. The environmental databases reviewed for the HMTS included Federal, State, and local environmental databases that identify and track sites that contain, or have released, hazardous materials to the soil or groundwater. The environmental databases reviewed included those compiled pursuant to California Government Code 65962.5 (commonly referred to as the Cortese List) that identify hazardous waste facilities and sites listed by the DTSC, County DEH, and SWRCB. The database search encompassed all sites within a 1/16-mile radius of the planning districts. The search radius was determined in order to identify the cases within the proposed PMPU area as well as offsite properties that would have the greatest potential impact on the planning districts at this programmatic level of analysis (i.e., within 1/16 mile or 330 feet of the boundary of the planning districts). This does preclude the possibility for cases outside of the database search radius to potentially impact a future project within the proposed PMPU area. As detailed under Threshold 2, PD1, PD2, PD3, and PD4 each contain open cases. These open cases are either currently undergoing investigation, remediation, and/or monitoring, or require further evaluation and therefore are under regulatory oversight by the appropriate agency. All of the planning districts except for PD8 have “closed sites” within their boundaries, which indicates that a previous hazardous site has been considered successfully remediated or the contaminated media successfully isolated and contained by the overseeing agency.

Proposed PMPU ECO Policy 2.2.3 would prevent the degradation of sediment and minimize exposure of adjacent communities to fill, soil, and sediment-based environmental contamination. Proposed PMPU ECO Policy 2.3.3 would require development that disrupts shoreline fill or Bay sediment to remove contaminated fill or appropriately contain and remediate fill. As such, these policies have the potential to avoid or reduce impacts associated with projects located on a site listed on an environmental database for hazardous materials associated with Bay fill or Bay sediment by ensuring any contaminated sediment encountered during development would be remediated, removed, or otherwise stabilized under the oversight of RWQCB.

Future development projects allowed under the proposed PMPU could result in the construction or redevelopment of landside and in-water projects and/or facilities within the various PMPU planning districts that would require waterside and landside ground- or sediment-disturbing construction activities, respectively, on a property with an active or closed case listed in an environmental database for hazardous materials. Ground- or sediment-disturbing activities such as grading, excavation, and/or dredging could encounter contaminated soils, groundwater, and/or sediment associated with a known case, or a site that had been remediated, capped, or closed in-place. If not properly handled, contaminated soils and sediments could be encountered by these ground- or sediment-disturbing construction activities, and could be released into the environment or could

exposed to workers. This potential release of contaminated media could result in a significant hazard to the public or environment, which is considered a significant impact (**Impact-HAZ-4**).

Compliance with applicable Federal, State, and local laws and regulations, including but not limited to RCRA, CWA, Division 7 of the California Water Code (which authorizes the San Diego RWQCB to regulate the investigation and cleanup of polluted sites), 22 CCR Division 4.5 (which authorizes DTSC oversight of contaminated sites and hazardous materials facilities), and the California Health and Safety Code, under which the County DEH operates the VAP and SAM Program, would ensure the proper handling and management of existing hazardous material sites. However, compliance with regulations alone would not reduce this potential impact to less than significant. Additionally, implementation of **MM-HAZ-1** would ensure that future development projects would follow the appropriate protocol to identify and mitigate potential impacts on site related to creating a significant hazard to the public or the environment due to being located on a site that is listed on an environmental database. In the event that unanticipated contamination is encountered, implementation of **MM-HAZ-2** would require an assessment by a qualified environmental professional to determine whether the potential contamination is a hazardous material. If the environmental professional determines that the potential contamination is a hazardous material, the environmental professional shall prepare a Management Plan and a Health and Safety Plan (as described in **MM-HAZ-1**) for the project site. With the implementation of **MM-HAZ-1** and **MM-HAZ-2**, the impact would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, could result in a significant impact related to being located on a site that is included on a list of hazardous materials sites (**Impact-HAZ-4**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with the new Waterfront Destination Park would involve ground-disturbing activities on or near a hazardous materials sites listed on a hazardous materials database (see Section 4.7.2.2 above and Figure 4.7-3). Ground-disturbing activities could encounter contaminated soil or groundwater and could release hazardous materials (**Impact-HAZ-4**). However, construction of Option 1 would not result in any additional or more severe impacts related to being located on a list of hazardous materials sites than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, could result in a significant impact related to being located on a site that is included on a list of hazardous

materials sites (**Impact-HAZ-4**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could occur outside of the option boundary within PD3.

Construction activities associated with the expanded Lane Field Setback Park would not involve ground-disturbing activities on or near a hazardous materials sites listed on a hazardous materials database (see Section 4.7.2.2 above and Figure 4.7-3). Therefore, impacts would be less than significant, and Option 2 would not result in any additional or more severe impacts related to being located on a site that is included on a list of hazardous materials sites than implementation of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, could result in a significant impact related to being located on a site that is included on a list of hazardous materials sites (**Impact-HAZ-4**). This significant impact would still occur within PD3 under Option 3 as a result of the future development that could occur outside of the option boundary within PD3.

Construction activities associated with the new park space that could be developed under Option 3 would involve ground-disturbing activities on or near a hazardous materials sites listed on a hazardous materials database (see Section 4.7.2.2 above and Figure 4.7-3). Ground-disturbing activities could encounter contaminated soil or groundwater and could release hazardous materials (**Impact-HAZ-4**). However, construction of Option 3 would not result in any additional or more severe impacts related to being located on a site that is included on a list of hazardous materials sites than buildout of the proposed PMPU without Option 3.

Operation

Based on the findings of the HMTS (Appendix G), all planning districts in the proposed PMPU area except for PD8 have sites previously listed on environmental databases included in the Cortese List (pursuant to Government Code 65962.5) that have been closed. PD8 does not have any known cases located within its boundaries. PD1, PD2, PD3, and PD4 have sites with an open status at the time of preparation of this PEIR. The proposed water and land uses would allow for the potential development of new visitor-serving commercial and recreational uses, as well as marine industrial uses that may be located on sites included on a database of hazardous materials sites. After construction of a future project is complete within these planning districts, the operation of these uses on a site that may be included on an environmental database of hazardous materials sites would not result in further impacts because the operation of these future developments would not require further earthwork activities, and thus would not disturb contaminated media and risk exposing the public or the environment.

Therefore, operational activities would not create a significant hazard to the public or the environment as a result of being located on a Government Code Section 65962.5 hazardous site, and, as a result, operational impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and

certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with being located on a site included in a list of hazardous materials sites.

Operational activities associated with the new Waterfront Destination Park may be located on a site that is included on a hazardous materials sites database; however, operations would not include ground-disturbing activities and thus would not disturb contaminated media and risk exposing the public or the environment. Therefore, operation of Option 1 would not result in any additional impacts related to being located on a site included on a list of hazardous materials sites than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with being located on a site included in a list of hazardous materials sites.

Operational activities associated with the expanded Lane Field Setback Park may be located on a site that is included on a hazardous materials sites database; however, operations would not include ground-disturbing activities and thus would not disturb contaminated media and risk exposing the public or the environment. Therefore, operation of Option 2 would not result in any additional impacts related to being located on a site included on a list of hazardous materials sites than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with being located on a site included in a list of hazardous materials sites.

Operational activities associated with the new park space that could be developed under Option 3 may be located on a site that is included on a hazardous materials sites database; however, operations would not include ground-disturbing activities and thus would not disturb contaminated media and risk exposing the public or the environment. Therefore, operation of Option 3 would not result in any additional impacts related to being located on a site included on a list of hazardous materials sites than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

None of the proposed PMPU Element policies would result in impacts related to the potential release of hazardous materials during routine use, transport, and disposal. Furthermore, proposed PMPU policies (noted in Section 4.7.4.3) would include implementation of District programs and measures to prevent pollution from construction and operations of projects in the proposed PMPU area and to minimize the exposure of the environment and the public to contamination.

Impact Determination and Mitigation

Future development would have the potential to be located on a site that is listed on a database pursuant to Government Code Section 65962.5. Construction activities associated with such projects may disturb known or unknown contamination and, as a result, would potentially create a significant hazard to the public or the environment.

Once constructed, operation of future development on such sites would not have the potential to disturb known or unknown contamination and, therefore, the operation of reasonably foreseeable future projects would not create a significant hazard to the public or the environment.

Significant Impacts

Impact-HAZ-4: Potential to Encounter Contamination On Site Due to Listing on a Hazardous Materials Database. Future development allowed under the PMPU that includes ground- or sediment-disturbing activities could encounter contaminated soil, groundwater, and/or sediment related to sites listed on a hazardous materials site database pursuant to Government Code Section 65962.5. Impacts would be significant.

Mitigation Measures

For **Impact-HAZ-4**:

Implement **MM-HAZ-1** and **MM-HAZ-2**, as described under Threshold 2.

Level of Significance After Mitigation

In order to address the presence of known or suspected onsite contamination associated with a site listed on an environmental database for hazardous materials (**Impact-HAZ-4**), a desktop investigation and/or a Phase I ESA and, depending on the results of the Phase I ESA, a Phase II ESA would be conducted for future projects to evaluate the potential environmental concerns prior to project commencement of any ground- or sediment-disturbing activities (**MM-HAZ-1**). The Phase II ESA may recommend remediation activities prior to ground- and sediment-disturbing activities, which would be conducted by a qualified environmental professional. In the event that unanticipated contamination is encountered, implementation of **MM-HAZ-2** would require an assessment by a qualified environmental professional to determine whether the potential contamination is a hazardous material. If the environmental professional determines that the potential contamination is a hazardous material, the environmental professional will prepare a Management Plan and a Health and Safety Plan (as described in **MM-HAZ-1**) for the project site. With implementation of these mitigation measures, the potential for future development under the proposed PMPU to result in a significant hazard to the public or the environment as a result of being located on a list compiled pursuant to Government Code Section 65962.5 (**Impact-HAZ-4**) would be less than significant because safeguards would be taken to ensure ground- and sediment-disturbing construction activities would not result in the release of hazardous materials.

Operation of the proposed water and land uses would not require further earthwork activities that would disturb known or unknown contamination, and thus would not disturb contaminated media listed pursuant to Government Code Section 65962.5 and would not risk exposing the public or the environment. Therefore, operations of the proposed water and land uses would not create a significant hazard to the public or the environment, and impacts would be less than significant.

Threshold 5: Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area?

Impact Analysis

As described in Section 4.7.2.4, *Existing Airports and Airstrips Within 2 Miles of the Proposed PMPU*, the proposed PMPU area is within the ALUCP area for the SDIA, NOLF Imperial Beach, and NAS North Island. Planning District 1, PD2, PD3, PD4, and PD10 are located either entirely or partially within the AIA for SDIA. Planning District 7, PD8, and PD9 are either entirely or partially within the AIA for NOLF Imperial Beach. (San Diego County Regional Airport Authority 2019). All or portions of PD1, PD2, PD3, PD4, PD7, PD9, and PD10 are within the AIA of NAS North Island.

Construction

Federal law requires proposed structures that exceed Federal Aviation Regulations Part 77 height criteria to undergo an Obstruction Evaluation/Airport Airspace Analysis. As noted in the discussion of 14 CFR Part 77 in Section 4.7.3.1, *Federal, Part 77* regulations apply to any construction or alteration that is more than 200 feet above the ground anywhere in the United States, and any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

1. 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport...with its longest runway more than 3,200 feet in actual length, excluding heliports.
2. 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport...with its longest runway no more than 3,200 feet in actual length, excluding heliports.
3. 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport...

Private developers and public agencies proposing the development of these structures must submit a Notice of Proposed Construction or Alteration to the FAA under Federal Aviation Regulations Part 77 (ALUC 2014). A Notice of Proposed Construction or Alteration is also required for structures or objects that may interfere with navigational aid and any project that would exceed 200 feet above ground level. Future development or redevelopment in all planning districts may involve the use of construction equipment and/or result in the development of structures that would exceed height limits and therefore would be required to comply with all FAA regulations and notification requirements. In addition, the Airport Land Use Commission (ALUC) is responsible for reviewing all land use plans, regulations, and projects within Review Area 1 of an airport's AIA. Within Review Area 2 of an airport's AIA, the ALUC is only responsible for reviewing land use plans and regulations proposing increases in height limits and for land use projects that:

- Have received from the FAA a Notice of Presumed Hazard, a Determination of Hazard, or a Determination of No Hazard subject to conditions, limitations, or marking and lighting requirements; and/or

- Would create hazards including glare; lighting; electromagnetic interference; dust, water vapor, or smoke; thermal plumes; and bird attractants.

As depicted on Figure 4.7-9, PD2 and PD3 are partially within Review Area 1 for SDIA, and PD1, PD2, PD3, PD4, and PD10 are within Review Area 2 of the SDIA AIA. A small portion of PD7 is within Review Area 2 for NOLF Imperial Beach. Planning District 1, PD2, PD3, PD4, PD7, PD9, and PD10 are entirely or partially within the AIA for NAS North Island. Future development that would exceed the height criteria in Federal Aviation Regulations Part 77 would be required to consult with the FAA and, under certain circumstances, the ALUC, if the development would be located within Review Area 1 or meet the review requirements for Review Area 2 described above. Compliance with these regulatory requirements would reduce potential conflicts with navigable airspace and alleviate the possibility of exacerbating an existing airport safety hazard for people working within the proposed PMPU area. Additionally, implementation of SR Policy 1.1.7, SR Policy 1.1.8, and SR Policy 1.1.9 of the proposed PMPU would also require coordination with the FAA for proposed development that meets the notification criteria under 14 CFR Part 77, and would also ensure development would be designed to minimize risk of injury to people and damage to property within the airport influence areas or interference with airport operations.

In addition to potential safety hazards, portions of the proposed PMPU area are within designated noise contours for SDIA as identified in the SDIA ALUCP. The proposed PMPU area is affected by notable noise contours (60 community noise equivalent level decibels or higher) from both the SDIA and NAS North Island. Noise contour maps for each of these are shown on Figures 4.10-2 and 4.10-3 in Section 4.10, *Noise and Vibration*. Elevated noise levels from operation of these airports is an existing condition within the noise contours. Development of future projects in portions of the proposed PMPU area that are within these noise contours could bring additional workers to the area during construction and expose them to noise from the airports, potentially exacerbating the existing condition by exposing additional people to excessive noise. However, these would be temporary construction-related jobs that would not result in the permanent exposure of people to excessive noise. In addition, OSHA has established noise and hearing conservation standards and regulations for construction (29 CFR 1926). OSHA established permissible noise exposure limits, and, when these limits are exceeded, requires that administrative or engineered controls be implemented to reduce noise levels (29 CFR 1926.52). If it is not possible to reduce noise levels, personal protective equipment must be used. Construction of future development would comply with OSHA regulations. Thus, the potential exposure of construction workers to airport-related noise would not be exacerbated, and would result in a significant impact due to the proposed project.

In accordance with the approved ALUCPs, proposed adoption of or amendment to a General Plan or Community/Specific/Precise Plan/Master Plan are subject to ALUC Review. As described in Section 6.2.3 of the proposed PMPU, the District would be responsible for the consistency review of discretionary and ministerial projects located within the AIAs of SDIA, NAS North Island, and NOLF Imperial Beach. The District would coordinate with the ALUC to ensure consistency with the ALUCPs for the preparation of future amendments or updates to the ALUCPs as well as future Port Master Plan Amendments.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and

certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with existing FAA regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with be located within an airport land use plan area.

Construction activities associated with the new Waterfront Destination Park would occur within Review Area 2 for SDIA. Implementation of Option 1 would occur in compliance with FAA regulation and ALUC review and approval to ensure consistency with the ALUCP. Thus, construction under Option 1 would not result in any additional or more severe impacts related to being located within an airport land use plan area than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with existing FAA regulations and agency oversight, implementation of the proposed PMPU, including PD3, would result in a less-than-significant impact associated with be located within an airport land use plan area.

Construction activities associated with the expanded Lane Field Setback Park would occur within Review Area 2 for SDIA. Implementation of Option 2 would occur in compliance with FAA regulation and ALUC review and approval to ensure consistency with the ALUCP. Thus, construction under Option 2 would not result in any additional or more severe impacts related to being located within an airport land use plan area than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with existing FAA regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with be located within an airport land use plan area.

Construction activities associated with the new park space that could be developed under Option 3 would occur within Review Area 2 for SDIA. Implementation of Option 3 would occur in compliance with FAA regulation and ALUC review and approval to ensure consistency with the ALUCP. Thus, construction under Option 3 would not result in any additional or more severe impacts related to being located within an airport land use plan area than buildout of the proposed PMPU without Option 3.

Operation

All of the planning districts in the PMPU area are either entirely, or partially, within the AIA for either SDIA, NOLF Imperial Beach, or NAS North Island.

Implementation of the proposed PMPU would allow for the development of structures or land uses that exceed the height criteria in Federal Aviation Regulations Part 77 and/or may conflict with the land use compatibility and safety policies established in the ALUCPs for SDIA, NOLF Imperial Beach,

and NAS North Island. In particular, new or expanded hotels or other commercial development allowed by planning district standards as well as designated primary uses could exceed the height limitations established by the FAA and the applicable ALUCP. Marine Terminal and Marine Industrial land uses may also result in the development of structures that would exceed height limitations (such as loading cranes for cargo ships). Introducing structures or buildings that exceed the height limitations established by the FAA and the applicable ALUCP could exacerbate existing safety hazards for people working within the proposed PMPU area.

Consultation with the FAA and, under certain circumstances where the operation of reasonably foreseeable future development projects is within Review Area 1 or 2, the ALUC, would be required for future development that would exceed the height criteria in Federal Aviation Regulations Part 77 and/or require a PMP Amendment to ensure the proposed structure would be consistent with the applicable ALUCP and would not exacerbate existing safety hazards. Project proponents would be required to engage in consultation pursuant to 14 CFR Part 77, which would reduce the potential for operation of these uses to result in conflicts with navigable airspace and alleviate the possibility of exacerbating an existing airport safety hazard for people working within the proposed PMPU area. Thus, the impact would be less than significant.

Portions of PD2 and PD3 are within the noise overlay area for SDIA, and a portion of PD1 is within the noise overlay area for NAS North Island; thus, permanent workers and visitors related to future development under the PMPU in these areas could be exposed to noise generated by the airport, which could exacerbate the existing conditions in the PMPU area by exposing additional people to excessive noise. Water and land use changes in PD1, PD2 and PD3 under the PMPU include additional recreation or retail facilities that could result in additional visitors and workers within the noise overlay areas. However, the water and land uses are not introducing a new use within the planning districts; rather, they are expanding or changing the square footage of these uses within the planning districts. In addition, future development would be required to comply with noise-related regulation from the California Building Code (CBC) (Title 24, Chapter 12) to ensure noise levels within structures and buildings meet the established standards, as well as OSHA noise standards for occupational noise exposure (29 CFR 1904). Furthermore, SR Policy 1.1.7, SR Policy 1.1.8, and SR Policy 1.1.9 of the proposed PMPU would require future development within an ALUCP review area to be sited and designed to minimize potential safety risks and noise conflicts related to the regional ALUCPs. Therefore, the water and land uses proposed for PD1, PD2, and PD3 within the portions that overlap with the SDIA or NASNI noise overlay areas that could result in additional visitors or workers would not result in exacerbating of the existing noise levels from the SDIA or NASNI. Thus, there would not be a potentially significant impact related to the exposure of people to a safety hazard or excessive noise from locating future development under the PMPU within an airport noise overlay area zone.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with existing FAA regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with being located within an airport land use plan area.

Operational activities associated with the new Waterfront Destination Park would occur within Review Area 2 for SDIA. Implementation of Option 1 would occur in compliance with FAA regulation and ALUC review and approval to ensure consistency with the ALUCP. Thus, operation under Option 1 would not result in any additional or more severe impacts related to safety hazards or excessive noise associated with being located within an airport land use plan area than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with existing FAA regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with being located within an airport land use plan area.

Operational activities associated with the expanded Lane Field Setback Park would occur within Review Area 2 for SDIA. Implementation of Option 2 would occur in compliance with FAA regulation and ALUC review and approval to ensure consistency with the ALUCP. Thus, operation under Option 2 would not result in any additional or more severe impacts related to safety hazards or excessive noise associated with being located within an airport land use plan area than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with existing FAA regulations and agency oversight, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with being located within an airport land use plan area.

Operational activities associated with the new park space that could be developed under Option 3 would occur within Review Area 2 for SDIA. Implementation of Option 3 would occur in compliance with FAA regulation and ALUC review and approval to ensure consistency with the ALUCP. Thus, operation under Option 3 would not result in any additional or more severe impacts related to safety hazards or excessive noise associated with being located within an airport land use plan area than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

None of the proposed PMPU Element policies could result in impacts related to safety hazards or excessive noise associated with being located within an airport land use plan area. Furthermore, SR Policy 1.1.7, SR Policy 1.1.8, and SR Policy 1.1.9 of the proposed PMPU would require future development within an ALUCP review area to be sited and designed to minimize potential safety risks. The policies would restrict development of any project that would cause hazards to air navigation located within airport approach and departure areas or known flight patterns within the application AIA, and thus would alleviate potential safety hazards and excessive noise for people working within the proposed PMPU area.

Impact Determination and Mitigation

Implementation of the proposed PMPU would occur within three airport land use plan areas, but would not result in a potential safety hazard or excessive noise for people working within the proposed PMPU area.

Threshold 6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact Analysis

Construction

Emergency response and evacuation are the responsibility of the police and fire protection service providers, as detailed in Section 4.12, *Public Services and Recreation*. The District's Harbor Police Department provides waterside and landside law enforcement as well as marine firefighting services in and around the Bay for the District. Because the proposed PMPU area encompasses several jurisdictions, the police and fire departments of these jurisdictions also provide services to the landside portions of the proposed PMPU area. The County of San Diego Office of Emergency Services Operational Area Emergency Operations Plan facilitates cooperation and communication between jurisdictions and agencies throughout the County. Each jurisdiction is encouraged to adopt the Operational Area Emergency Operations Plan with specific modifications as needed (County of San Diego 2018). The District has developed an Emergency Operations Plan and supplemental preparedness plans in accordance with the SEMS and NIMS, the State and Federal emergency response standards, respectively.

Buildout of the proposed water and land uses is anticipated to increase visitors to the proposed PMPU area by facilitating an increase in public access, commercial recreational development, and expanding and enhancing recreational open space. Primary uses could include, but are not limited to, anchorage areas, overnight accommodations, recreational berthing and mooring, or ferry craft and water transportation landing. Future development or redevelopment projects associated with the proposed PMPU could include construction activities that have the potential to temporarily obstruct or interfere with emergency response by vehicle, helicopter, or vessel due to the presence of large construction equipment or the temporary partial closure of roadways.

In addition, planning district standards would allow for the realignment or redevelopment of existing roadways and driveways, which could temporarily block emergency access by vehicle or by helicopter, or evacuation routes during construction. Each future PMPU-related project would be required to comply with specific requirements set forth by the agencies responsible for emergency response at the future project site, as well as the requirements of the District's emergency response plans and emergency operations plan, as identified in SR Policy 2.1.2 and SR Policy 2.1.3 to be implemented as part of the proposed PMPU. Furthermore, SR Policy 2.1.1, SR Policy 2.1.4, SR Policy 2.1.5, SR Policy 2.1.6, and SR Policy 2.1.7 would further reduce potential hazards related to conflicts with emergency response and evacuation plans because these policies ensure the District would maintain and update all other emergency response and mitigation plans and regional or cross-jurisdictional response plans to be accurate and up-to-date. Future development allowed under the PMPU would be compliant with all applicable emergency response plans and measures. If construction activities of future projects would affect the roadways of adjacent local jurisdictions,

those projects would be required to comply with traffic control regulations as stipulated by the appropriate jurisdiction and would be required to obtain a permit from the jurisdiction with authority over the roadway. In the City of San Diego, Municipal Code Section 129.0702 requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects, construction projects, and other work that encroaches into the public right-of-way, including sidewalks, as well as an accompanying traffic control plan. The City of Imperial Beach requires a Temporary Encroachment Permit for any work performed in any public right-of-way of the city (Municipal Code Section 12.04.020). City of Coronado Municipal Code Section 52.10 requires a Right-of-Way Permit for all work on public property, such as repairs to sidewalks, curbs and gutters, driveway aprons, and parkways (the area between the sidewalk and the curb), or to place equipment in the public right-of-way, such as a crane placed in the street to transport materials to an upper story (see Section 4.14.3.3 of Section 4.13, *Transportation, Circulation, and Mobility*, for more details). In addition, construction within State highway rights-of-way would require a Caltrans Encroachment Permit, which includes a Traffic Control Plan in compliance with the *Manual on Uniform Traffic Control Devices* (Traffic Control Plans Part 6). As part of these requirements, there are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilities crossover by emergency vehicles, and vehicle storage and staging area for emergency vehicles (see also Section 4.12, *Public Services and Recreation*, for further discussion). Therefore, compliance with the Operational Area Emergency Operations Plan, the District's Emergency Operations Plan, and supplemental plans, as well as compliance with applicable traffic control regulations, would ensure that necessary detours and safety plans are implemented. Therefore, potential impacts related to interference with an emergency response plan or emergency evacuation as a result of construction activities would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with applicable emergency plans and traffic control regulations, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the potential to impair or interfere with an existing emergency response plan or emergency evacuation plan.

Construction activities associated with the new Waterfront Destination Park would involve the closure of a roadway and could temporarily block emergency access by vehicle or by helicopter, or evacuation routes during construction. However, implementation of Option 1 would occur in compliance with the requirements of the District's emergency response plans and emergency operations plan, as identified in SR Policy 2.1.2 and SR Policy 2.1.3 to be implemented as part of the proposed PMPU, as well as with City of San Diego Municipal Code Section 129.0702, which requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects. Compliance with these regulations would ensure consistency with the existing emergency

response plans. Thus, construction under Option 1 would not result in any additional or more severe impacts related to impairment of an existing emergency response plan than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with applicable emergency plans and traffic control regulations, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the potential to impair or interfere with an existing emergency response plan or emergency evacuation plan.

Construction activities associated with the expanded Lane Field Setback Park could temporarily block emergency access by vehicle or by helicopter, or evacuation routes during construction. However, implementation of Option 2 would occur in compliance with the requirements of the District's emergency response plans and emergency operations plan, as identified in SR Policy 2.1.2 and SR Policy 2.1.3 to be implemented as part of the proposed PMPU, as well as with City of San Diego Municipal Code Section 129.0702, which requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects. Compliance with these regulations would ensure consistency with the existing emergency response plans. Thus, construction under Option 2 would not result in any additional or more severe impacts related to impairment of an existing emergency response plan than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with applicable emergency plans and traffic control regulations, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact associated with the potential to impair or interfere with an existing emergency response plan or emergency evacuation plan.

Construction activities associated with the new park space that could be developed under Option 3 could temporarily block emergency access by vehicle or by helicopter, or evacuation routes during construction. However, implementation of Option 3 would occur in compliance with the requirements of the District's emergency response plans and emergency operations plan, as identified in SR Policy 2.1.2 and SR Policy 2.1.3 to be implemented as part of the proposed PMPU, as well as with City of San Diego Municipal Code Section 129.0702, which requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects. Compliance with these regulations would ensure consistency with the existing emergency response plans. Thus, construction under Option 3 would not result in any additional or more severe impacts related to impairment of an existing emergency response plan than buildout of the proposed PMPU without Option 3.

Operation

Planning district standards would allow for roadway and driveway realignment in several planning districts in order to facilitate efficient circulation for vehicles, pedestrians, and bicycles. In addition, implementation of the proposed PMPU would result in the development of several types of primary and secondary uses, including, but not limited to, commercial, visitor-serving, and maritime industrial uses in all of the planning districts. This development would increase connectivity to the waterfront and is anticipated to result in an increase in guests and visitors to the proposed PMPU area. When future development or redevelopment projects are designed, they must comply with the

safety standards of each applicable jurisdiction responsible for issuing building permits for the project. In addition, future projects would be required to incorporate acceptable driveway widths for emergency response vehicles, and provide sufficient emergency evacuation routes for the users of the project. The future development would be required to comply with any specific requirements by the police and fire agencies regarding emergency access prior to project approval. Furthermore, future development would be required to operate in compliance with the District's Emergency Operations Plan and supplemental preparedness plans. Therefore, impacts during operation would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with applicable emergency plans and traffic control regulations, implementation of the proposed PMPU would result in a less-than-significant impact associated with the potential to impair or interfere with an existing emergency response plan or emergency evacuation plan.

Construction activities associated with the new Waterfront Destination Park would involve the closure of a roadway and could temporarily block emergency access by vehicle or by helicopter, or evacuation routes during construction. However, implementation of Option 1 would occur in compliance with the requirements of the District's emergency response plans and emergency operations plan, as identified in SR Policy 2.1.2 and SR Policy 2.1.3 to be implemented as part of the proposed PMPU, as well as with City of San Diego Municipal Code Section 129.0702, which requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects. Compliance with these regulations would ensure consistency with the existing emergency response plans. Thus, construction under Option 1 would not result in any additional or more severe impacts related to impairment of an existing emergency response plan than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with applicable emergency plans and traffic control regulations, implementation of the proposed PMPU would result in a less-than-significant impact associated with the potential to impair or interfere with an existing emergency response plan or emergency evacuation plan.

Construction activities associated with the expanded Lane Field Setback Park could temporarily block emergency access by vehicle or by helicopter, or evacuation routes during construction. However, implementation of Option 2 would occur in compliance with the requirements of the District's emergency response plans and emergency operations plan, as identified in SR Policy 2.1.2 and SR Policy 2.1.3 to be implemented as part of the proposed PMPU, as well as with City of San Diego Municipal Code Section 129.0702, which requires a Public Right-of-Way Permit for

Traffic Control for all public improvement projects. Compliance with these regulations would ensure consistency with the existing emergency response plans. Thus, construction under Option 2 would not result in any additional or more severe impacts related to impairment of an existing emergency response plan than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with applicable emergency plans and traffic control regulations, implementation of the proposed PMPU would result in a less-than-significant impact associated with the potential to impair or interfere with an existing emergency response plan or emergency evacuation plan.

Construction activities associated with the new park space that could be developed under Option 3 could temporarily block emergency access by vehicle or by helicopter, or evacuation routes during construction. However, implementation of Option 3 would occur in compliance with the requirements of the District's emergency response plans and emergency operations plan, as identified in SR Policy 2.1.2 and SR Policy 2.1.3 to be implemented as part of the proposed PMPU, as well as with City of San Diego Municipal Code Section 129.0702, which requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects. Compliance with these regulations would ensure consistency with the existing emergency response plans. Thus, construction under Option 3 would not result in any additional or more severe impacts related to impairment of an existing emergency response plan than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

None of the proposed PMPU Element policies would result in impacts related to impairing implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan. Furthermore, proposed PMPU policies would further reduce potential hazards related to conflicts with emergency response and evacuation plans because these policies ensure the District would maintain and update all other emergency response and mitigation plans and regional or cross-jurisdictional response plans to be accurate and up-to-date. Future development under the PMPU would comply with all noted emergency response plans and measures. Thus, these policies would minimize potential impacts related to the interference with or impairment of adopted emergency response plans due to the implementation of the proposed PMPU.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant, and no mitigation is required.

4.7.5 Cumulative Impact Analysis

A significant cumulative impact on hazards and hazardous materials would result if the proposed PMPU were to make a cumulatively considerable contribution to cumulative impacts related to the creation of a significant hazardous materials impact on the public or environment; hazardous materials emissions; being located on a listed hazardous materials site; safety hazards related to

airport operations; and interference with an adopted emergency response plan when evaluated within the context of past, present, and probable future projects with related impacts.

4.7.5.1 Geographic Scope

The geographic scope for cumulative impacts associated with hazards and hazardous materials consists of areas that could be affected by implementation of the water and land use designations and policies of the PMPU, as well as areas affected by the future development allowed under the PMPU. In general, projects occurring within 0.25 mile of the proposed PMPU area were considered in this analysis due to the localized nature of potential impacts associated with the release of hazardous materials in the environment.

4.7.5.2 Cumulative Effects From Past, Present, and Probable Future Projects

Table 2-2 in Chapter 2, *Environmental Setting*, includes past, present, and probable future plans and programs in the vicinity of the proposed PMPU area. The Midway-Pacific Highway Community Plan Update, the City of Imperial Beach 2019 General Plan/Local Coastal Program Land Use Plan Update, the National City Bayfront Projects and Plan Amendments, the Chula Vista Bayfront Master Plan project, the Central Embarcadero Redevelopment, the San Diego International Airport Development Plan, the San Diego County Regional Airport Authority Naval Air Station North Island Airport Land Use Compatibility Plan, and the SANDAG 2021 Regional Plan are located either within the proposed PMPU area or within 0.25 mile of the proposed PMPU area, and could have the potential to contribute to cumulative effects related to hazards and hazardous materials.

Present and probable future projects within the cumulative study area could disturb or result in the exposure of hazardous materials during construction activities. Ground disturbance during construction could encounter historic unauthorized releases of hazardous materials in soils, sediment, or groundwater or could encounter lead or organochlorine pesticides that have leached into soil from aboveground historic uses. For projects having the potential to disturb or result in the exposure of hazardous materials, there would be a significant impact should one or more of the cumulative projects encounter hazardous materials. Implementation of mitigation measures during construction, similar to those identified for the PMPU, would be included to reduce potential impacts to a level below significance. These projects, like the PMPU, are required to comply with all Federal, State, and local laws and regulations regarding hazards and hazardous materials, including those described in Section 4.7.3, which would reduce potential releases of hazardous materials into the environment to levels below that which would constitute a health hazard. However, disturbance of historic known contamination, previously unknown contamination, or other use of hazardous materials that could result in risk to the environment or the public, could result in significant impacts that require the implementation of mitigation (similar to the proposed Plan). Therefore, because development associated with cumulative projects could result in significant impacts, cumulative effects related to hazardous materials from past, present, and reasonably foreseeable future projects would be cumulatively significant.

Probable future projects associated with the cumulative plans and programs could be located within the AIA for SDIA and NOLF Imperial Beach, and may result in the development of structures within the AIA. These projects would be required to receive FAA and ALUC review and determination at the implementation of the project, and would implement any requirements to reduce safety hazards

related to airport operations. Therefore, cumulative effects related to airport safety would not be cumulatively significant.

4.7.5.3 Project Contribution

Implementation of the future development allowed under the proposed PMPU would involve the use of typical construction- and maintenance-related hazardous materials that could potentially be released during transport, storage, use, or disposal activities. However, compliance with the mandatory existing laws and regulations that govern the transport, storage, use, and disposal of hazardous materials would minimize impacts. These regulations are enforced by the local CUPA (County DEH), DTSC, DOT, USCG, San Diego RWQCB, California Highway Patrol, and Caltrans; and all probable future projects that transport, store, use, or dispose of hazardous materials would be required to comply with the existing regulatory requirements and process. Therefore, implementation of the proposed PMPU would not result in a cumulatively considerable contribution to less-than-significant cumulative impacts associated with the transport, storage, use, or disposal of hazardous materials.

Based on the history of uses along the bayfront and the extent of known contamination within the proposed PMPU area, it is possible soil, groundwater, or sediment contaminated by historic unauthorized releases of hazardous materials or the common use of lead-based paint and organochlorine pesticides as termiticides, could be encountered during ground- or sediment-disturbing activities throughout the proposed PMPU area and released into the environment (**Impact-C-HAZ-1** [i.e., known contamination] and **Impact-C-HAZ-2** [i.e., undocumented contamination]) which would result in a cumulatively considerable contribution to a significant cumulative impact. Mitigation measures **MM-HAZ-1** and **MM-HAZ-2** would be required to assess potential for contamination at a future project site, and to ensure the safe handling of previously undiscovered contaminated soil, groundwater, or sediment if it is encountered (see **MM-HAZ-1** and **MM-HAZ-2**). Implementation of **MM-HAZ-1** and **MM-HAZ-2** would reduce the impact so that it would not be considered cumulatively considerable after mitigation. The HMTS prepared for this project identified open cases with ongoing investigation or remediation in PD1, PD2, PD3, and PD4. Future development that may occur at a location of an open case could result in a cumulatively considerable contribution prior to mitigation. Future development would be required to comply with mitigation measures to correctly characterize the conditions of the site and to develop a soil, groundwater, and/or sediment management plan if contaminated media is determined to be present on the site; and such projects would be required to safely characterize and handle contaminated media for reuse, export, or disposal (**MM-HAZ-1**). Implementation of **MM-HAZ-1** would reduce the impact so that the contribution of future development under the PMPU to this impact would not be considered cumulatively considerable after mitigation.

Ground-disturbing construction may also encounter soil contaminated with lead or organochlorine pesticides (**Impact-C-HAZ-3**) which would be a significant cumulatively considerable impact without mitigation. In order to reduce potential impacts related to the accidental release of lead-contaminated soil or organochlorine pesticide-contaminated soil to the environment, future development involving soil disturbance within the immediate area of a building built prior to 1980 would be required to prepare an environmental site assessment to investigate potential contamination (**MM-HAZ-1**). If undocumented hazardous material associated with buildings built prior to 1980 is discovered during construction activities, **MM-HAZ-2** would be implemented to minimize potential risk to workers and the environment. Implementation of **MM-HAZ-1** and **MM-**

HAZ-2 would reduce the impact so that the contribution of future development under the PMPU to this impact would not be considered cumulatively considerable after mitigation.

Typical construction-related hazardous materials would be used during construction and operation of future development under the proposed PMPU. It is possible that these materials could be released in small amounts during construction or maintenance activities. However, compliance with Federal, State, and local regulations described in Section 4.7.3 would minimize impacts. Consequently, future development under the proposed PMPU is not expected to cause or contribute to a significant hazard to the public or the environment through upset and accident conditions because no new hazardous materials would be introduced at the project site and the existing regulatory framework would minimize potential impact from spills or releases of hazardous materials. As such, the proposed PMPU's contribution to cumulative significant impacts related to accidental release of hazardous materials would not be cumulatively considerable.

There are no schools within the proposed PMPU area boundaries, but there are four within 0.25 mile of one or more planning districts. Implementation of the proposed PMPU would not include the use of acutely hazardous materials, substances, or waste, and would not result in hazardous emissions within 0.25 mile of a school. As such, the proposed PMPU's contribution to cumulative impacts related to creating or causing hazardous conditions close to schools would not be cumulatively considerable.

As previously mentioned, the HMTS identified cases listed on hazardous materials site databases pursuant to Government Code Section 65962.5 (**Impact-C-HAZ-4**), which would be a significant impact without mitigation. Future development would be required to comply with **MM-HAZ-1 and MM-HAZ-2** to correctly characterize the conditions of the site and to develop a soil, groundwater, and/or sediment management plan if contaminated media is determined to be present on the site; and such projects would be required to safely characterize and handle contaminated media for reuse, export, or disposal. Implementation of **MM-HAZ-1** would reduce the impact so that the contribution of future development under the PMPU to this impact would not be considered cumulatively considerable after mitigation. Therefore, the proposed PMPU's contribution to the cumulative significant impacts related to being located on or near a site listed pursuant to Government Code Section 65962.5 would not be cumulatively considerable.

The proposed PMPU could result in future development projects that would be located within the AIA for SDIA, NASNI, or NOLF Imperial Beach. However, the future development would be required by Federal and State law to obtain FAA approval and ALUC review and determination of construction and operation structures. Future development also would be required to implement any requirements identified in the ALUC and FAA determinations. Therefore, the proposed PMPU's contribution to cumulative impacts related to creating or causing a hazard to occur due to proximity to an airport would not be cumulatively considerable.

Construction and operation of future PMPU-related development would be required to comply with specific requirements set forth by the agencies responsible for emergency response at the future project site. If future PMPU-related development would affect the roadways of adjacent local jurisdictions, those projects would be required to comply with emergency plans and traffic control regulations as stipulated by the appropriate jurisdiction and would be required to obtain a permit from the jurisdiction with authority over the roadway. In addition, future development would be required to incorporate acceptable driveway widths for emergency response vehicles and comply with specific requirements by emergency response agencies as a condition of project approval.

Therefore, implementation of the proposed PMPU would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan, and its contribution to cumulative impacts on emergency and/or evacuation plans would not be cumulatively considerable.

Therefore, hazardous materials and hazards impacts from PMPU-related construction and operation activities would be minimized through existing regulations, oversight by the applicable agencies, and the incorporation of mitigation measures. As such, when combined with past, present, and probable future projects' hazardous material impacts, the proposed PMPU's contribution would be less than cumulatively considerable.

4.7.5.4 Cumulative Impact Determination and Mitigation

Significant Impacts

Implementation of the proposed PMPU would result in a cumulatively considerable contribution to cumulative hazards and hazardous materials impacts (**Impact-C-HAZ-1** through **Impact-C-HAZ-4**).

Mitigation Measures

For **Impact-C-HAZ-1**:

Implement **MM-HAZ-1: Conduct an Environmental Site Assessment, Prepare a Remediation Plan, and Remediate Accordingly**, as specified under Threshold 2.

For **Impact-C-HAZ-2, Impact-C-HAZ-3, and Impact-C-HAZ-4**:

Implement **MM-HAZ-1**, as specified under Threshold 2.

Implement **MM-HAZ-2: Identify Unknown Hazardous Materials Encountered During Construction**, as specified under Threshold 2.

Level of Significance After Mitigation

As discussed above, the PMPU's incremental contribution to cumulative hazard and hazardous materials impacts would not be cumulatively considerable after mitigation and would be less than significant.

4.8.1 Overview

This section describes the existing conditions and laws and regulations for hydrology and water quality, followed by an analysis of the proposed Port Master Plan Update’s (PMPU’s) potential to: (1) violate water quality standards or waste discharge requirements; (2) substantially decrease groundwater supplies; (3) substantially alter existing drainage patterns; (4) risk release of pollutants due to inundation from seiche, tsunami or flooding; and (5) conflict with the water quality control plan or sustainable groundwater management plan. Sea level rise and the PMPU’s potential to exacerbate its effects are addressed in Section 4.13, *Sea Level Rise*.

Other hydrology and water quality issues identified in Appendix G of the California Environmental Quality Act (CEQA) Guidelines, including impacts on housing within a 100-year flood hazard area and exposure of people or structures to flooding as a result of the failure of a levee or a dam, were addressed in Section IX of the Initial Study/Environmental Checklist (Appendix A) and were determined to be less than significant. The analysis and conclusions regarding these impacts are also summarized in Chapter 5, Section 5.4, *Effects Found Not to Be Significant*.

Table 4.8-1 summarizes the significant impacts and mitigation measures (MMs) discussed in Section 4.8.4.4, *Project Impacts and Mitigation Measures*.

Table 4.8-1. Summary of Significant Hydrology and Water Quality Impacts and Mitigation Measures

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-WQ-1: Disturbance of Contaminated Sediment During Construction	PD1, PD2, PD3, PD4	MM-WQ-1: Monitor Turbidity and Constituents of Concern During Construction-Related Sediment Disturbance MM-WQ-2: Implement Best Management Practices During Construction-Related Sediment Disturbance MM-WQ-3: Apply Silt Curtains During Construction-Related Sediment	Significant and Unavoidable	MM-WQ-1 would require monitoring of water quality during construction where contaminants have been identified, and would ensure work would be halted if water quality objectives are violated. MM-WQ-2 would minimize resuspension, spillage, and misplaced sediment. MM-WQ-3 would require the use of silt curtains during dredging areas within constituents of concern (COCs). MM-WQ-4 would ensure dredging would be conducted while minimizing resuspension of contaminated sediments and ensure the proper disposal

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
		<p>Disturbance with Contaminants of Concern</p> <p>MM-WQ-4: Implement a Dredging Management Program</p> <p>MM-WQ-5: Implement a Sediment Management Program</p> <p>MM-WQ-6: Implement Post-Dredging Remediation</p> <p>MM-WQ-7: Remove and Dispose of Creosote Piles Properly</p>		<p>of contaminated sediments. MM-WQ-5 requires the preparation of a Sediment Management Program, and MM-WQ-6 requires remediation of a project site if sampling confirms exceedances of COCs after completion of a project. MM-WQ-7 would minimize potential exposure to creosote-treated piles during removal. However, it would still be possible that in-water construction could disturb contaminated sediment and release COCs to the water column. Additionally, approval of in-water construction methods is in the jurisdiction of both the District and RWQCB, so the District would not have sole authority to approve or reject such methods. As such, Impact-WQ-1 would remain significant and unavoidable.</p>
Impact-WQ-2: Contribution to Water Quality Impairments from Future Marina Operations	PD2, PD3, PD9, PD10	MM-WQ-8: Prepare and Implement a Marina Best Management Practice Plan and Copper Reduction Measures	Significant and Unavoidable	MM-WQ-8 would reduce inputs of total and dissolved copper from vessel activity at marinas; however, the net increase in the number of vessels with copper-based paints would result in a significant and unavoidable impact.
Impact-WQ-3: Water Quality Degradation from Aquaculture Operations	All planning districts	MM-WQ-9: Conduct Water Quality Monitoring of Aquaculture Operations	Less than Significant	MM-WQ-9 would require future aquaculture operations to develop an aquaculture water quality monitoring plan that would require water quality monitoring before, during, and after aquaculture operations. The impact would be reduced to less than significant.

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
<p>Impact-C-WQ-1: Cumulative Disturbance of Contaminated Sediment During Construction</p>	<p>PD1, PD2, PD3, PD4</p>	<p>MM-WQ-1, MM-WQ-2, MM-WQ-3, MM-WQ-4, MM-WQ-5, MM-WQ-6, MM-WQ-7, as described above</p>	<p>Cumulatively Considerable and Unavoidable</p>	<p>MM-WQ-1 would require monitoring of water quality during construction where contaminants have been identified, and would ensure work would be halted if water quality objectives are violated. MM-WQ-2 would minimize resuspension, spillage, and misplaced sediment. MM-WQ-3 would require the use of silt curtains during dredging areas within COCs. MM-WQ-4 would ensure dredging would be conducted while minimizing resuspension of contaminated sediments and ensure the proper disposal of contaminated sediments. MM-WQ-5 requires the preparation of a Sediment Management Program, and MM-WQ-6 requires remediation of a project site if sampling confirms exceedances of COCs after completion of a project. MM-WQ-7 would minimize potential exposure to creosote-treated piles during removal. However, it would still be possible that in-water construction could disturb contaminated sediment and release COCs to the water column. Additionally, approval of in-water construction methods is in the jurisdiction of both the District and RWQCB, so the District would not have sole authority to approve or reject such methods. As such, Impact-WQ-1 would remain cumulatively considerable and unavoidable.</p>

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-C-WQ-2: Cumulative Contribution to Water Quality Impairments from Future Marina Operations	PD2, PD3, PD9, PD10	MM-WQ-8 , as described above	Cumulatively Considerable and Unavoidable	Although MM-WQ-8 would reduce inputs of total and dissolved copper from vessel activity at marinas, the net increase in the number of vessels with copper-based paints would result in a cumulatively considerable and unavoidable impact.
Impact-C-WQ-3: Cumulative Water Quality Degradation from Aquaculture Operations	All planning districts	MM-WQ-9 , as described above	Less than Cumulatively Considerable	MM-WQ-9 would require future aquaculture operations to develop an aquaculture water quality monitoring plan that would require water quality monitoring before, during, and after aquaculture operations.

4.8.2 Existing Conditions

This section describes the existing hydrology and water quality setting of the proposed PMPU area. Section 4.8.2.1 describes surface water hydrology related to local drainage conditions (i.e., storm water drainage or flooding resulting from direct rainfall) and flood hazards (i.e., flood hazard zones determined by the Federal Emergency Management Agency). Section 4.8.2.2 describes flood hazards related to storm surges, tsunamis, and seiches. Water quality is discussed in Section 4.8.2.3.

4.8.2.1 Surface Water Hydrology and Flood Hazards

The proposed PMPU area generally includes dense urban development and associated infrastructure (e.g., roads, sidewalks, gutters); therefore, much of the drainage area can be classified as highly impervious. San Diego Bay is the receiving water body for surface flow from much the proposed PMPU area. See Figure 4.8-1 for the surface water hydrological units in the PMPU area. The planning districts are underlain by city, San Diego Unified Port District (District), and other storm drain lines and conveyances that discharge to the Bay.

The Federal Emergency Management Agency (FEMA) has mapped zones of anticipated flooding using base flood elevations for 100-year flood events, as presented on the agency's Flood Insurance Rate Maps (FIRMs). Areas that are subject to 100-year flood events within each planning district are identified as 11 percent Annual Chance Flood Hazard Zones; moderate flood hazard areas are between the base flood and 500-year flood and are identified as 0.2 percent Annual Chance Flood Hazard Zones, as shown on Figures 4.8-2 through 4.8-9.

A general description of the existing drainage patterns and flood hazards (riverine and coastal) within each planning district is provided below.

Planning District 1: Shelter Island

The Shelter Island Planning District (PD1) is located within the northwest portion of the jurisdiction. Much of the stormwater within PD1 is collected by inlets, and it flows through conveyance structures and discharges into San Diego Bay through outfall structures, many of which are subject to tidal inundation. Existing drainage features within PD1 can be found on Figure 4.8-2.

Areas that are subject to 100-year flood events within PD1 include the boat marinas. Moderate flood hazard areas include the landside perimeter of Shelter Island Drive, the intersection of Anchorage Lane and Canon Street, the La Playa Trail, Qualtrough Street, and an area approximately 100 feet north of America's Cup Harbor. In addition, flooding is known to occur at the intersection of Anchorage Lane and Cannon Street during periods of combined rainfall and high tide. FEMA flood zones within PD1 are shown on Figure 4.8-2.

Planning District 2: Harbor Island

The Harbor Island Planning District (PD2) is situated in the northern portion of the District's jurisdiction. Much of the stormwater within PD2 is collected by inlets, and it flows through conveyance structures before discharging into San Diego Bay through outfall structures, which are subject to tidal inundation. Existing drainage features within PD2 can be found on Figure 4.8-3.

Areas that are subject to 100-year flood events within PD2 include the boat marinas. Moderate flood hazard areas include a portion of North Harbor Drive along the eastern boundary of PD2. Areas between North Harbor Drive and Laurel Street to Pacific Coast Highway are known to flood during storms and high tides. This flooding occurs under existing conditions because stormwater runoff from the watershed upstream of the site is collected into storm drains that convey the runoff from the steep slope to more level ground. The leveled portion of the pipe, which occurs west of Interstate (I-) 5, does not have capacity due to its sloped origin and becomes pressurized. When combined with a high tide event, pipe capacity is further affected, and the runoff conveyed from upstream emerges out of any openings such as catch basins. This area is considered an existing local drainage hazard and is not a mapped FEMA floodplain. FEMA flood zones within PD2 are shown on Figure 4.8-3.

Planning District 3: Embarcadero

The Embarcadero Planning District (PD3) is located within the northeast portion of the District's jurisdiction. Much of the stormwater within PD3 is collected by inlets, and it flows through conveyance structures and discharges into San Diego Bay through outfall structures, which are subject to tidal inundation. Existing drainage features within PD3 can be found on Figure 4.8-4.

Areas that are subject to 100-year flood events within PD3 include the San Diego Marriott Marquis boat marina and commercial docks in the northern portion of the planning district. Moderate flood hazard areas include a portion of North Harbor Drive along the northern perimeter of the planning district. FEMA flood zones within PD3 are shown on Figure 4.8-4.

Planning District 4: Working Waterfront

The Working Waterfront Planning District (PD4) is situated within the east-central portion of the District's jurisdiction. Much of the stormwater within the Tenth Avenue Marine Terminal (TAMT) is collected by inlets, and it flows through conveyance structures and discharges into San Diego Bay through outfall structures, which are subject to tidal inundation. Existing drainage features within PD4 can be found on Figure 4.8-5.

Areas that are subject to 100-year flood events within PD4 include the boat docks, the northeast portion of the TAMT and adjacent railroad, and a portion of the General Dynamics National Steel and Shipbuilding Company (NASSCO) facility along the southern boundary of the planning district. Moderate flood hazard areas include a portion of the railroad on the northern boundary. The NASSCO facility in the southern portion is identified predominantly as an area of undetermined flood hazard. Switzer Creek has an identified FEMA special flood hazard area (SFHA) of Zone A. Zone A includes areas subject to inundation by the 1 percent annual chance flood event generally determined using approximate methodologies. FEMA flood zones within PD4 are shown on Figure 4.8-5.

Planning District 7: South Bay

The South Bay Planning District (PD7) is situated within the southern portion of the District's jurisdiction. There are no developed lands within PD7, and storm drain inlets are limited to roadway drainage associated with Silver Strand Boulevard. Some stormwater discharges as sheet flow into San Diego Bay. Existing drainage features within PD7 can be found on Figure 4.8-6.

The majority of PD7 is subject to 100-year flood events. A portion of the southeast boundary is within a regulatory floodway. There are no moderate flood hazard areas within the planning district. FEMA flood zones within PD7 are shown on Figure 4.8-6.

Planning District 8: Imperial Beach Oceanfront

The Imperial Beach Oceanfront Planning District (PD8) is situated within the southwest portion of the District's jurisdiction. Much of the stormwater within PD8 is collected by inlets, and it flows through conveyance structures and discharges into the Pacific Ocean through outfall structures, which are subject to tidal inundation. Existing drainage features within PD8 can be found on Figure 4.8-7.

Areas that are subject to 100-year flood events within PD8 include a portion of the pier and the beach. Moderate flood hazard areas include the beach. FEMA flood zones within PD8 are shown on Figure 4.8-7.

Planning District 9: Silver Strand

The Silver Strand Planning District (PD9) is located within the southwest portion of the District's jurisdiction. Much of the stormwater within PD9 is collected by inlets, and it flows through conveyance structures and discharges into San Diego Bay through outfall structures, which are subject to tidal inundation. Existing drainage features within PD9 can be found on Figure 4.8-8.

Areas that are subject to 100-year flood events within PD9 include the boat marinas. Land area within PD9 is designated as an *Area of Minimal Flood Hazard*. FEMA flood zones within PD9 are shown on Figure 4.8-8.

Planning District 10: Coronado Bayfront

The Coronado Bayfront Planning District (PD10) is within the west-central portion of the District's jurisdiction. Much of the stormwater within PD10 is collected by inlets, and it flows through conveyance structures and discharges into San Diego Bay through outfall structures, which are subject to tidal inundation. Existing drainage features within PD10 can be found on Figure 4.8-9.

Areas that are subject to 100-year flood events within PD10 include boat marinas and portions of the shoreline. Moderate flood hazard areas include portions of the shoreline within the planning district. The FEMA flood zones within PD10 are shown on Figure 4.8-9.

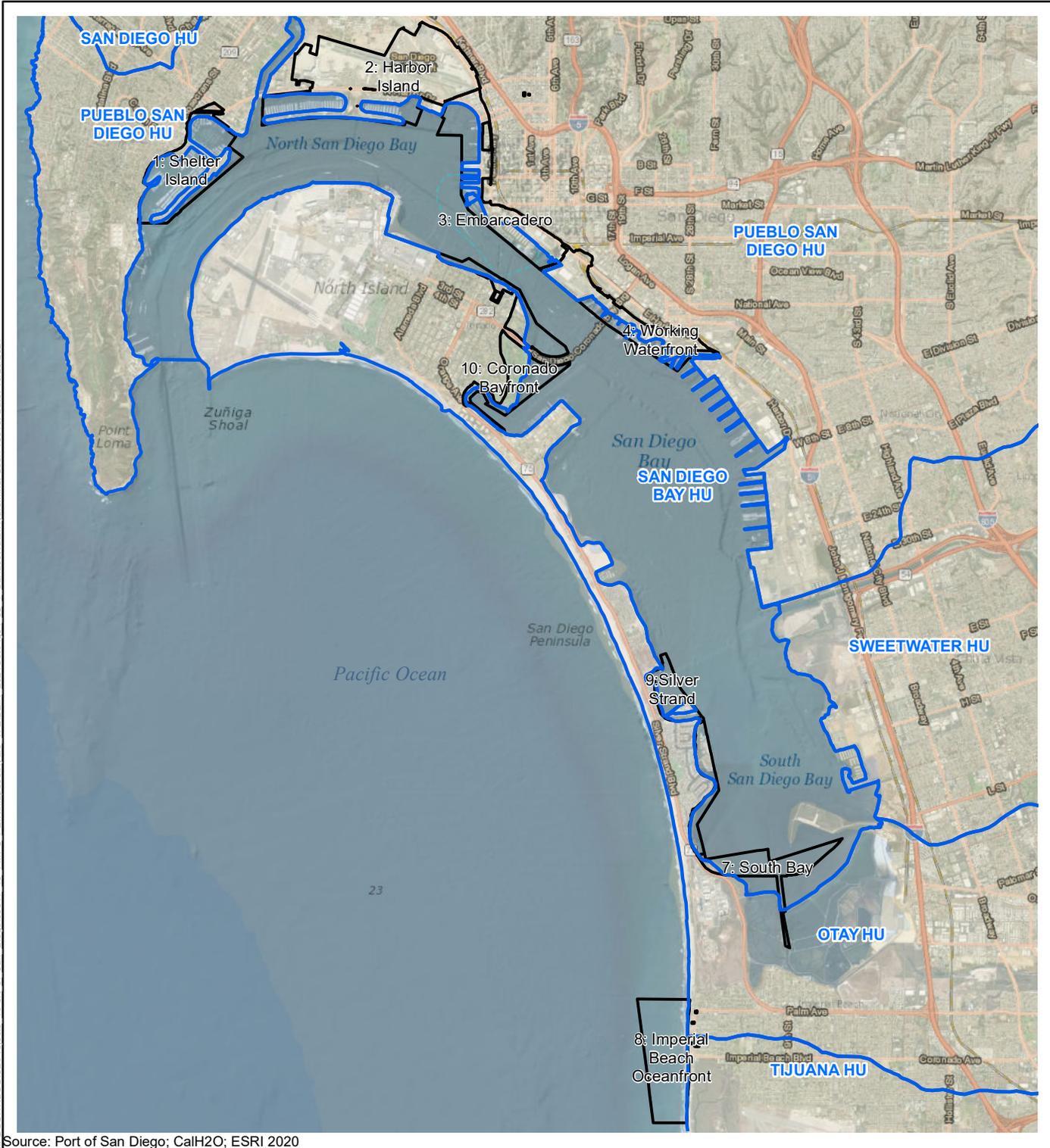
4.8.2.2 Storm Surges, Storm Tides, Tsunamis, and Seiches

Storm surge is an abnormal rise of water generated by a storm, over and above the predicted astronomical tides. Storm surge should not be confused with *storm tide*, which is defined as the water level rise due to the combination of storm surge and the astronomical tide. This rise in water level can cause extreme flooding in coastal areas, particularly when storm surge coincides with normal high tide (NOAA 2020).

A *tsunami* is a series of extremely long-period waves caused by a large and sudden displacement of the ocean, usually the result of an earthquake below or near the ocean floor. A *seiche* is an oscillation of the surface of an enclosed body of water. Seiches may be triggered by strong winds, changes in atmospheric pressure, earthquakes, tsunamis, or tides.

The planning districts are adjacent to and within San Diego Bay, which includes areas of semi-enclosed water basins. As shown on Figure 4.8-10, each planning district is partially within a designated tsunami hazard zone; the waterside portion is entirely within the tsunami hazard zone, and a small portion of the landside frontage of the planning districts at some locations is within the designated tsunami hazard zone (Department of Conservation 2009). Furthermore, the County of San Diego tsunami map identifies portions of the planning districts as being within a potential tsunami flood area (County of San Diego 2016). In addition, the large water body of the Bay experiences tidal changes and, therefore, may encounter flooding from storm surges and storm tides. In sum, the planning districts are within or adjacent to areas that may encounter storm surges, storm tides, tsunamis, and seiches.

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Source: Port of San Diego; CalH2O; ESRI 2020

- Legend**
- Proposed Planning District
 - Hydrologic Unit

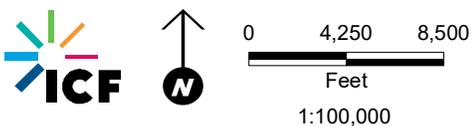


Figure 4.8-1
Surface Water Hydrology
Planning Districts 1-4, 7-10
Port Master Plan Update EIR

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Legend

Proposed Planning District	Storm Drain Pipe Diameter (inches)	Flood Zone
MS4 Features	> 36"	1% Annual Chance Flood Hazard
Outfall	24" - 36"	0.2% Annual Chance Flood Hazard
	18" - 24"	Area with Reduced Risk Due to Levee
	< 18"	Open Water
		Floodway



Source: Port of San Diego; FEMA; ESRI 2020

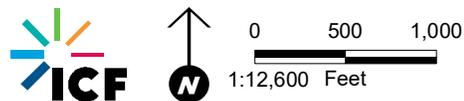
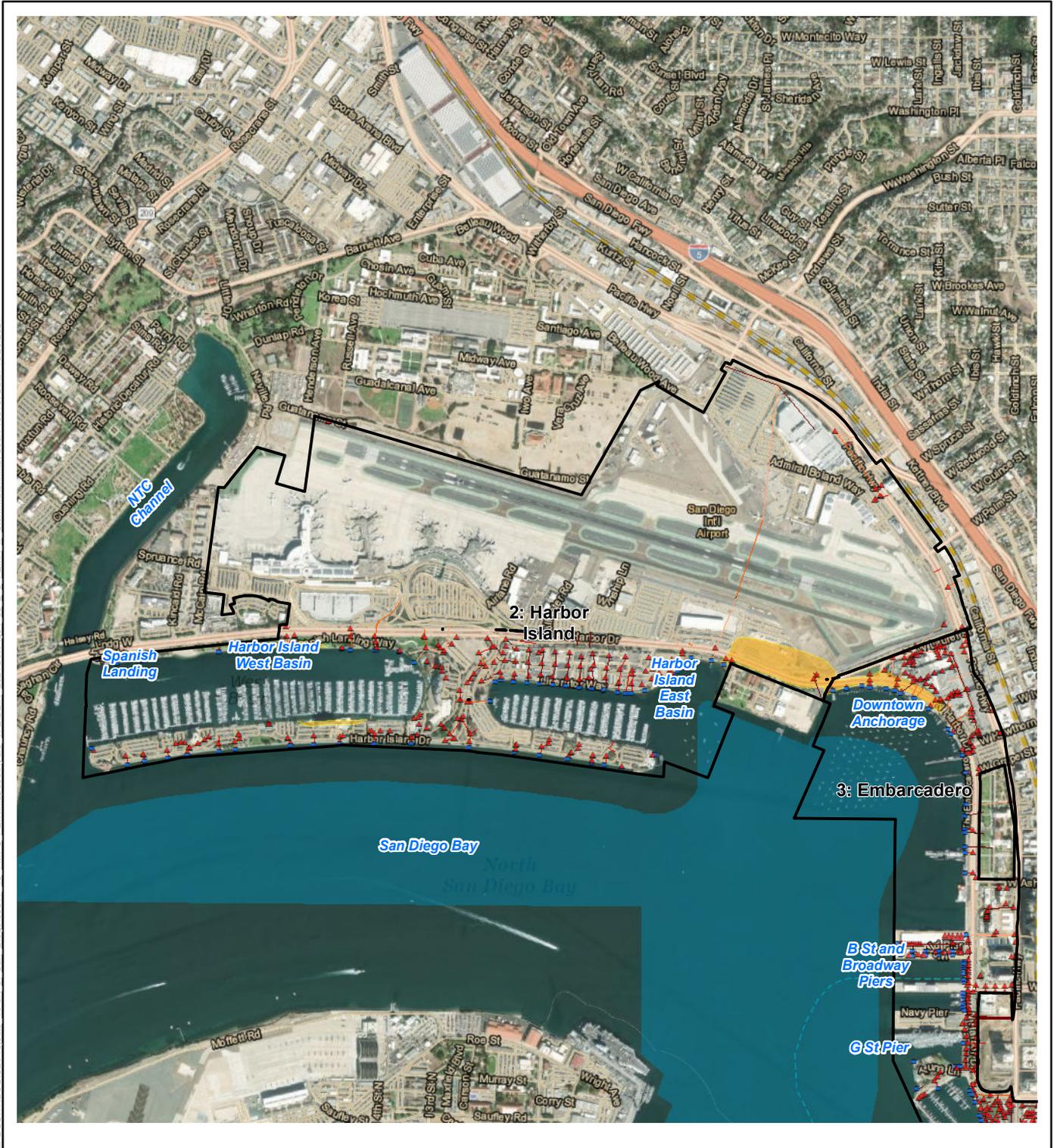


Figure 4.8-2
Planning District 1: Shelter Island
FEMA Flood Zones and Stormwater Drainage
Port Master Plan Update EIR

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|----------------------------|---|-------------------------------------|
| Proposed Planning District | Storm Drain Pipe Diameter (inches) | Flood Zone |
| MS4 Features | > 36" | 1% Annual Chance Flood Hazard |
| Outfall | 24" - 36" | 0.2% Annual Chance Flood Hazard |
| | 18" - 24" | Area with Reduced Risk Due to Levee |
| | < 18" | Open Water |
| | | Floodway |

Source: Port of San Diego; FEMA; ESRI 2020

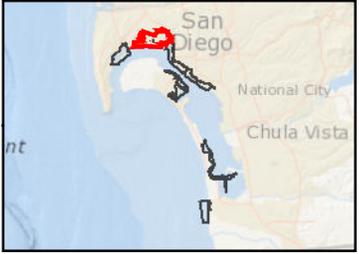


Figure 4.8-3
Planning District 2: Harbor Island
FEMA Flood Zones and Stormwater Drainage
Port Master Plan Update EIR

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| Proposed Planning District | Storm Drain Pipe Diameter (inches) | Flood Zone |
| MS4 Features | > 36" | 1% Annual Chance Flood Hazard |
| Outfall | 24" - 36" | 0.2% Annual Chance Flood Hazard |
| | 18" - 24" | Area with Reduced Risk Due to Levee |
| | < 18" | Open Water |
| | | Floodway |

Source: Port of San Diego; FEMA; ESRI 2020

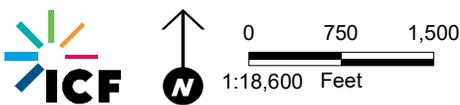
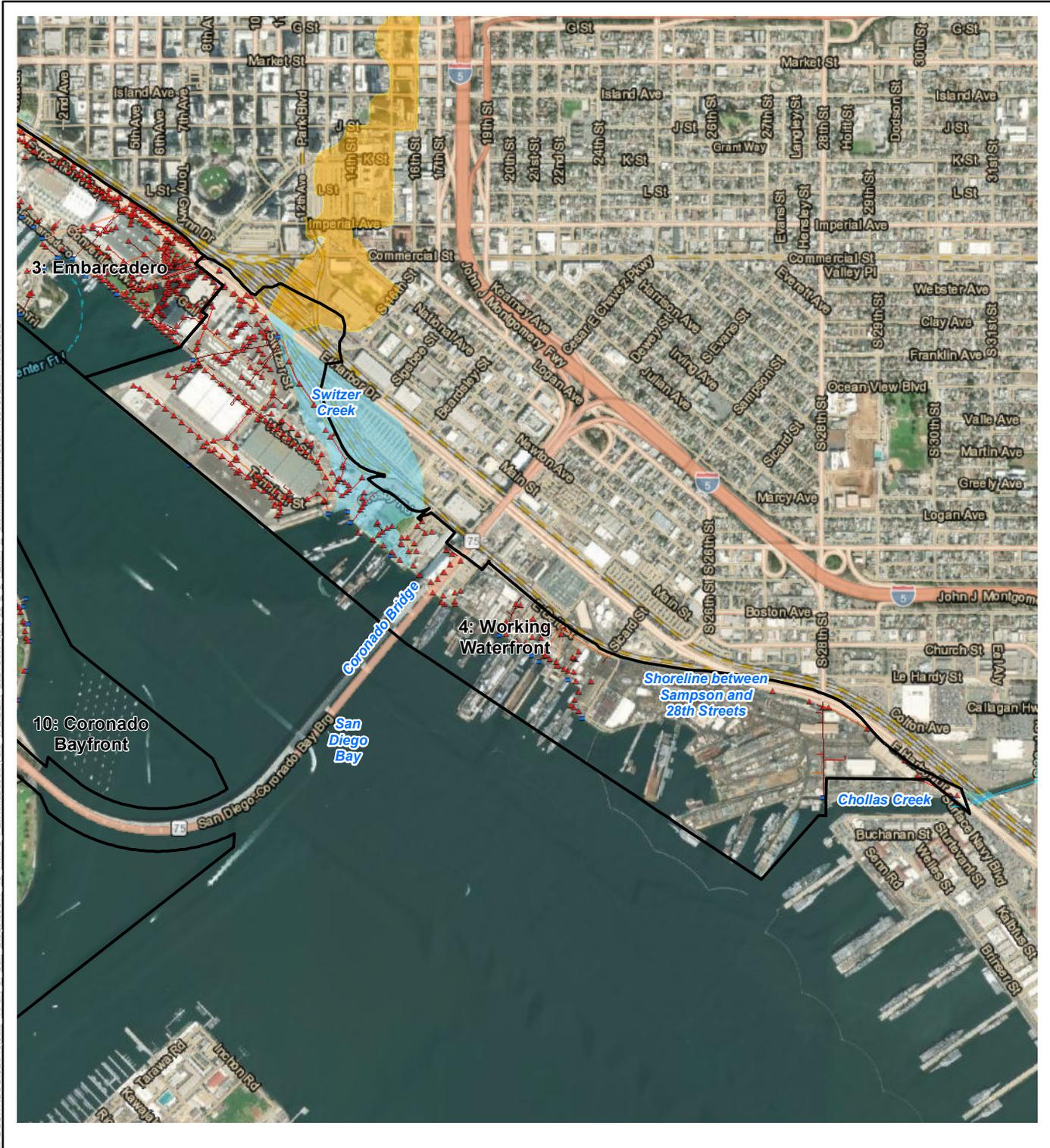


Figure 4.8-4
Planning District 3: Embarcadero
FEMA Flood Zones and Stormwater Drainage
Port Master Plan Update EIR

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| Proposed Planning District | Storm Drain Pipe Diameter (inches) | Flood Zone |
| Flowline (NHD) | > 36" | 1% Annual Chance Flood Hazard |
| MS4 Features | 24" - 36" | 0.2% Annual Chance Flood Hazard |
| Outfall | 18" - 24" | Area with Reduced Risk Due to Levee |
| | < 18" | Open Water |
| | | Floodway |



Source: Port of San Diego; FEMA; ESRI 2020

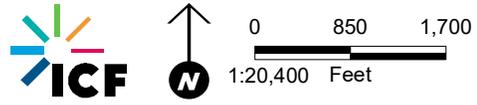
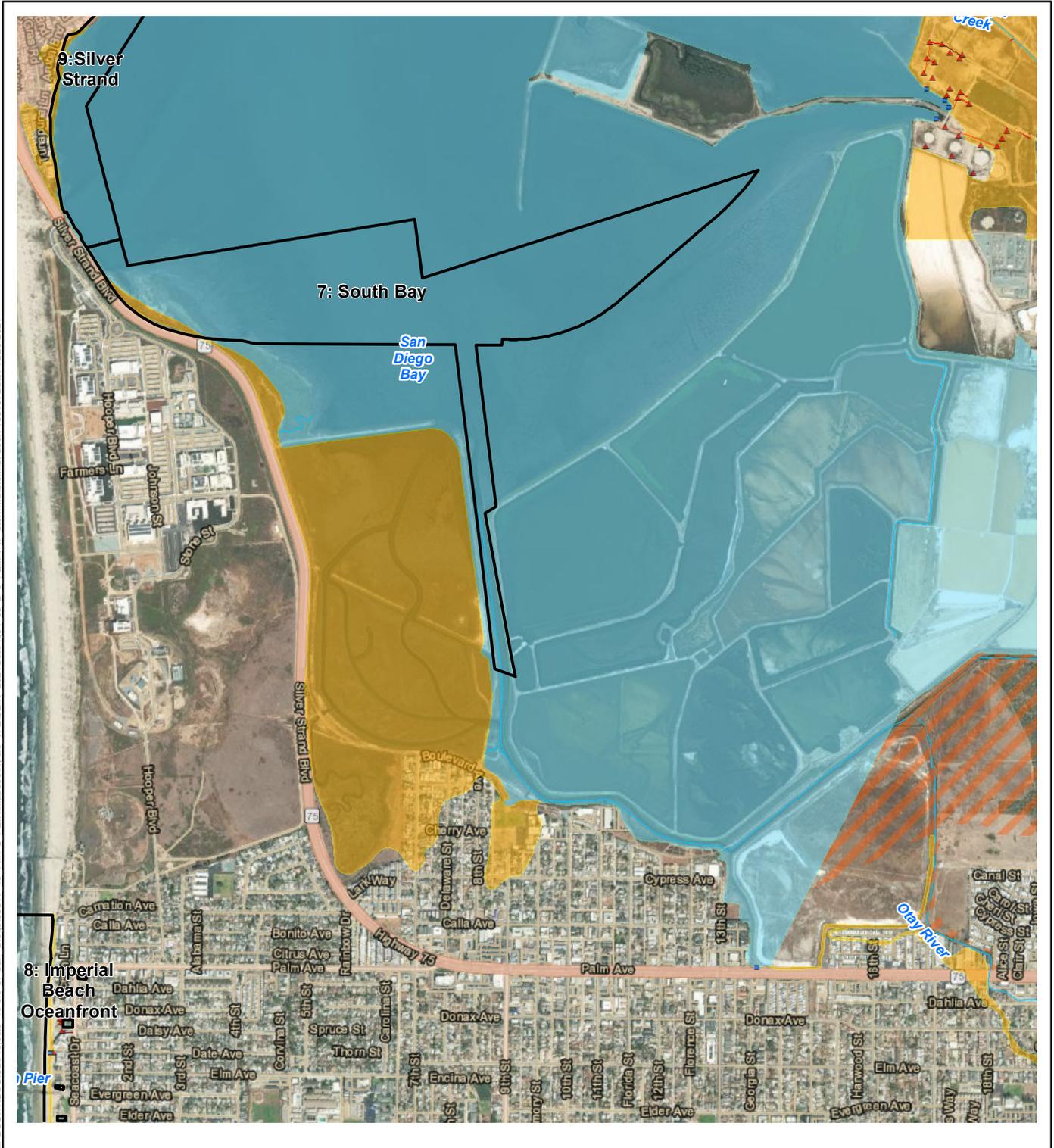


Figure 4.8-5
Planning District 4: Working Waterfront
FEMA Flood Zones and Stormwater Drainage
Port Master Plan Update EIR

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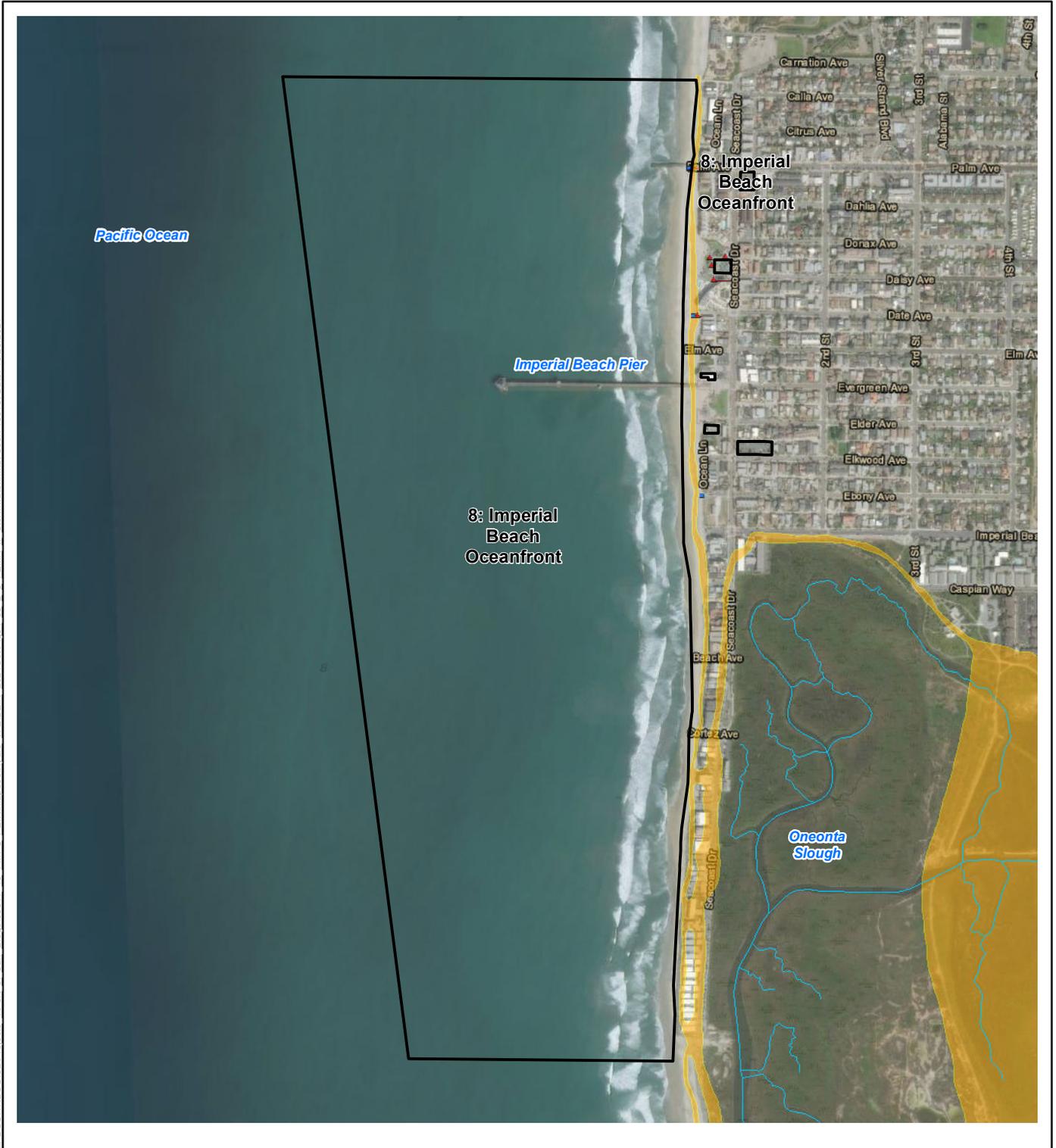
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|----------------------------|---|-------------------------------------|
| Proposed Planning District | Storm Drain Pipe Diameter (inches) | Flood Zone |
| Flowline (NHD) | > 36" | 1% Annual Chance Flood Hazard |
| MS4 Features | 24" - 36" | 0.2% Annual Chance Flood Hazard |
| Outfall | 18" - 24" | Area with Reduced Risk Due to Levee |
| | < 18" | Open Water |
| | | Floodway |

Source: Port of San Diego; FEMA; ESRI 2020



Figure 4.8-6
Planning District 7: South Bay
FEMA Flood Zones and Stormwater Drainage
Port Master Plan Update EIR

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| Proposed Planning District | Storm Drain Pipe Diameter (inches) | Flood Zone |
| Flowline (NHD) | > 36" | 1% Annual Chance Flood Hazard |
| MS4 Features | 24" - 36" | 0.2% Annual Chance Flood Hazard |
| Outfall | 18" - 24" | Area with Reduced Risk Due to Levee |
| | < 18" | Open Water |
| | | Floodway |

Source: Port of San Diego; FEMA; ESRI 2020

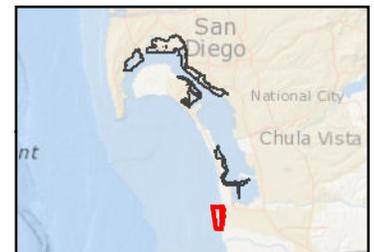
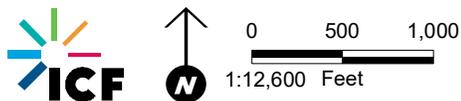


Figure 4.8-7
Planning District 8: Imperial Beach Oceanfront
FEMA Flood Zones and Stormwater Drainage
Port Master Plan Update EIR

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Proposed Planning District	Storm Drain Pipe Diameter (inches)	Flood Zone
MS4 Features	> 36"	1% Annual Chance Flood Hazard
Outfall	24" - 36"	0.2% Annual Chance Flood Hazard
	18" - 24"	Area with Reduced Risk Due to Levee
	< 18"	Open Water
		Floodway

Source: Port of San Diego; FEMA; ESRI 2020



Figure 4.8-8
Planning District 9: Silver Strand
FEMA Flood Zones and Stormwater Drainage
Port Master Plan Update EIR

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|----------------------------|---|-------------------------------------|
| Proposed Planning District | Storm Drain Pipe Diameter (inches) | Flood Zone |
| MS4 Features | > 36" | 1% Annual Chance Flood Hazard |
| Outfall | 24" - 36" | 0.2% Annual Chance Flood Hazard |
| | 18" - 24" | Area with Reduced Risk Due to Levee |
| | < 18" | Open Water |
| | | Floodway |

Source: Port of San Diego; FEMA; ESRI 2020

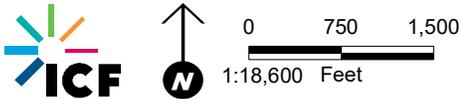
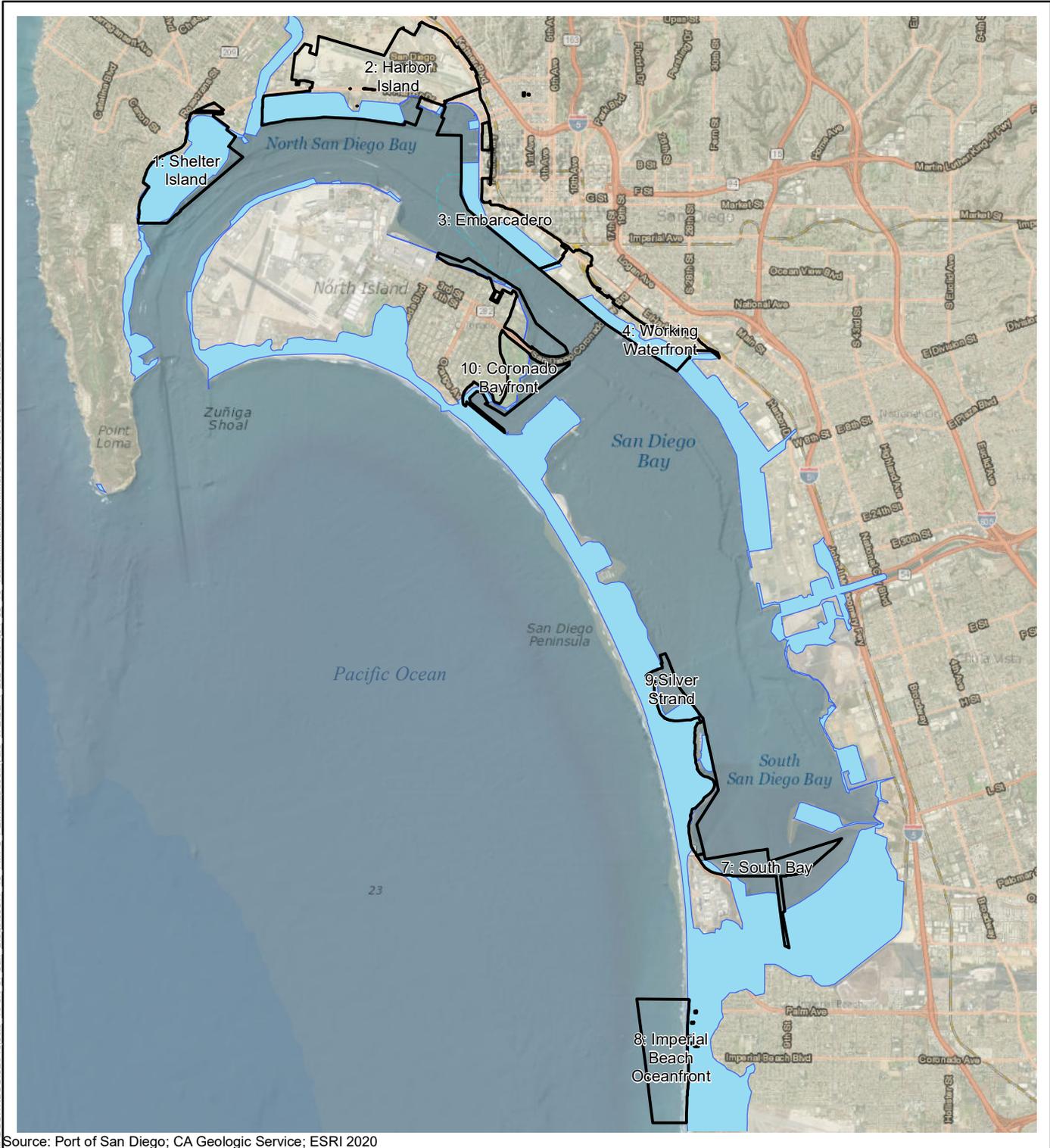


Figure 4.8-9
Planning District 10: Coronado Bayfront
FEMA Flood Zones and Stormwater Drainage
 Port Master Plan Update EIR

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Source: Port of San Diego; CA Geologic Service; ESRI 2020

- Legend**
- Proposed Planning District
 - Tsunami Inundation Zones

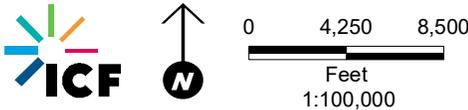


Figure 4.8-10
Tsunami Inundation Zones
Planning Districts 1-4, 7-10
Port Master Plan Update EIR

4.8.2.3 Surface and Waterbody Water Quality

The San Diego region is divided into 11 hydrologic units (HUs) for administrative purposes. Each of the HUs flows from elevated regions in the east to lagoons, estuaries, or bays in the west. The PMPU area is within three HUs: Pueblo San Diego (908.00), Otay (910.00), and Tijuana (911.00). Table 4.8-2 shows the hierarchical structure of the HUs and water bodies for each of the planning districts. Figure 4.5-17 in Section 4.5, *Geology and Soils*, shows each HU in reference to the planning districts.

Table 4.8-2. Planning Districts Hydrologic Units and Water Bodies

Hydrologic Unit	Planning District	Water Bodies (and adjacent shorelines)
Pueblo San Diego (908.00)	PD1	San Diego Bay San Diego Bay Shoreline (Shelter Island Yacht Basin, Shelter Island Shoreline Park, America's Cup Harbor)
	PD2	San Diego Bay San Diego Bay Shoreline (Harbor Island-East Basin, Harbor Island-West Basin, Spanish Landing)
	PD3	San Diego Bay San Diego Bay Shoreline (Downtown Anchorage, Marriott Marina, Vicinity of B Street and Broadway Piers, G Street Pier)
	PD4	San Diego Bay San Diego Bay Shoreline (between Sampson and 28th Streets, near Chollas Creek, near Coronado Bridge, Switzer Creek) Switzer Creek Chollas Creek
Otay (910.00)	PD7	San Diego Bay Otay River
	PD8	Pacific Ocean Shoreline, Imperial Beach Pier Pacific Ocean
	PD9	San Diego Bay San Diego Bay Shoreline (Coronado Cays)
	PD10	San Diego Bay San Diego Bay Shoreline (Glorietta Bay, Tidelands Park)
Tijuana (911.0)	PD8	Pacific Ocean Shoreline, Imperial Beach Pier Pacific Ocean

Sources: San Diego RWQCB 2016, 2018.

As indicated within Chapter 3, *Project Description*, PD5 and PD6 are not part of the proposed PMPU and are not analyzed within this PEIR.

San Diego Bay, Chollas Creek, Otay River, Switzer Creek, and the Pacific Ocean are the main receiving water bodies for the planning districts (see Table 4.8-2).¹ Water quality in these receiving waters is influenced by processes and activities that take place within the Pueblo San Diego, Otay, and Tijuana

¹ Additional surface water bodies within the District's jurisdiction include Paradise Creek (PD5 and PD6), Paleta Creek (PD5), Sweetwater River (PD5 and PD6), and Telegraph Creek (PD6). However, these surface water bodies are not included within the boundaries of the proposed PMPU area.

watersheds.² Because the proposed PMPU area is primarily developed, surface water quality in the planning districts is affected directly by stormwater runoff from adjacent streets and highways, as well as industrial and commercial areas, and inputs from upstream that are off District Tidelands.

Primary Pollutants of Concern

The principal constituents of concern for surface water quality in the proposed PMPU area include metals, toxic substances, and indicator bacteria.³ On past occasions, stormwater runoff, urban runoff, and sewer spills have led to high concentrations of coliform bacteria, resulting in beach advisories in all of the HUs. A description of the health and environmental effects from exposure to the primary pollutants of concern is provided below.

Metals

- **Copper**, at low levels, is important for good health (copper is an essential element for plants and animals, including humans); however, high levels of copper can be harmful to health or the environment. In humans and mammals, copper is absorbed from the stomach and small intestine. In excess, copper exposure is associated with gastrointestinal distress, liver and kidney damage, anemia, and immunosuppression (ATSDR 2004). Effects of exposure to copper for laboratory mammals include decreased growth for mice and rats and reduced reproduction (reduced kit survival) for mink (NTP 1993; Aulerich et al. 1982; Dodds-Smith et al. 1992). Reduced growth and survival in fish and birds have also been reported from exposure to dietary copper (Jensen and Maurice 1978; Kang et al. 2005; Lanno et al. 1985; Mehring et al. 1960; Mount et al. 1994; Poupoulis and Jensen 1976; Smith 1969).
- **Lead** exposure is associated with neurological, renal, cardiovascular, hematological, immunological, reproductive, and developmental effects. There is a particular concern with lead exposure and the neurological effects in infants and children (ATSDR 2020). The exposure of mammals to high concentrations of lead in the diet has been reported to cause anemia, weight loss, muscle atrophy, paralysis, brain damage, mortality, and reproductive effects (Eisler 1988) and reductions in growth and survival for both fish and birds (Mount et al. 1994; Kendall and Scanlon 1982; Hoffman et al. 1985; Pattee 1984; Edens et al. 1976). Sublethal concentrations of lead can accumulate in blood and tissues, and higher-trophic-level organisms may experience adverse effects as a result of consuming prey with accumulated lead concentrations.
- **Mercury** exposure is associated with a number of toxic effects to humans and wildlife, including adverse effects on the kidneys and nervous system, growth, reproduction, blood and serum chemistry, motor coordination, vision, hearing, histology, metabolism and survival, and can have teratogenic effects (Eisler 1987; ORNL 1998). The U.S. Environmental Protection Agency (EPA) has identified mercury chloride and methylmercury as possible human carcinogens. Adverse effects on growth, reproduction, and survival have been observed in mink after dietary mercury exposure from fish consumption (Wobeser et al. 1976a, 1976b; Aulerich et al. 1974; Dansereau et al. 1999). Changes in behavior of fish and avian species (i.e., predator avoidance, motor

² The Chula Vista Bayfront (PD6) is located in the Sweetwater HU, but because it is not part of the proposed PMPU, it is not discussed in this existing setting.

³ A detailed summary and assessment of these pollutants and concentrations is available in the San Diego Bay Water Quality Improvement Plan 2019-2020 Annual Report, Appendix 4 (Monitoring Results and Assessments) and the Tijuana River Watershed Management Area 2016 Water Quality Improvement Plan. These documents are incorporated by reference, and weblinks are included in Chapter 9, *References*, of this PEIR.

coordination) have also been observed in laboratory studies following exposure to mercury (Bouton et al. 1999; Heinz 1975; Kania and O'Hara 1974; Kreitzer and Heinz 1974; Matta et al. 2001; Webber and Haines 2003); the significance of these behavior alternations on ecological populations in the wild are unknown.

- **Zinc** is an essential element; while low levels of zinc are important for good health, high levels of zinc can be harmful to health or the environment. Toxicity studies have shown adverse effects from ingestion of zinc by laboratory mammals including anemia, pancreatic and kidney impairment, decreased immune function, and reproductive effects, including infertility (ATSDR 2005). Exposure to dietary zinc has been associated with adverse effects on growth in fish and wildlife, reproductive parameters in mammals (Persia et al. 2004; Roberson and Schaible 1960; Schlicker and Cox 1968; Sutton and Nelson 1937; Straube et al. 1980; Takeda and Shimma 1977). Toxicity values are generally affected by the age and nutrient status of the organism, changes in the physicochemical regimen, and interactions with other chemicals, especially copper salts.

Toxic Substances

- **Polycyclic aromatic hydrocarbons (PAHs)** are a human health and environmental concern. The focus on toxicity for PAHs is for 16 PAHs.⁴ A number of studies show increased incidence of cancer (lung, skin, and urinary cancers) in humans exposed to PAH mixtures from inhalation or dermal exposure (ATSDR 1995). Many individual PAH compounds have been classified as probable or possible carcinogens by entities such as the National Toxicology Program and EPA (2018). Non-carcinogenic chronic effects of PAHs involve pulmonary, gastrointestinal, renal, and dermatologic systems in humans. The toxicity, carcinogenicity, and mutagenicity of PAHs vary with the molecular weight of the compound, the degree of alkylation, and the mode of accumulation (water, food or sediment) by the organism (Neff 1979; Moore and Ramamoorthy 1984). LPAHs generally have significant acute toxicity, whereas HPAHs do not. However, several HPAHs are known to be carcinogenic and cause chronic toxicity. Dietary exposure of PAHs in animals have been linked to immunosuppression and reproductive effects. In fish, exposure to PAHs is known to cause narcosis (a generalized toxic effect) and developmental abnormalities in embryos (Schultz 1989). Fish exposed to PAH contaminated sediments through direct contact have been shown to exhibit increased incidence of skin and liver lesions and other deformities (Myers et al. 1994; Pinkney et al. 2000).
- **Polychlorinated biphenyls (PCBs)** are persistent in the environment and exist in San Diego Bay sediments and surrounding areas at levels requiring regulatory action. Because of their stability and lipophilicity, PCBs bioaccumulate through the food chain, and are stored in fatty tissues. In San Diego Bay, the concentration of PCBs in fish tissue, particularly of high trophic level species, has led to the publishing of fish consumption advisories for recreational fish caught in the Bay. Data from human and laboratory mammal studies provides evidence of the toxic potential of exposure to PCBs (ATSDR 2000). Dietary consumption appears to be a major source of PCB accumulation in humans and wildlife. Epidemiological and laboratory studies indicate an association between dietary PCB exposures and both reproductive functions and developmental effects. PCBs also have the potential for toxicity from dermal and inhalation

⁴ The 16 PAHs that are the focus for evaluating PAH toxicity are: 7 LPAHs (i.e., acenaphthene, acenaphthylene, anthracene, fluoranthene, fluorene, naphthalene, and phenanthrene) and 9 HPAHs (benzo(a)anthracene, benzo(a)pyrene, benzo(b/j)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and pyrene).

exposure. PCBs have been reported to elicit a broad range of toxic effects in laboratory mammals, including lethality, hepatotoxicity, porphyria, body weight loss, dermal toxicity, thymic atrophy, immunosuppressive effects, reproductive and developmental effects, carcinogenesis, and neurotoxicity (Safe 1991, 1992, 1994, 1984; Seegal 1996; Silberhorn et al. 1990; WHO 1993; Battershill 1994). Adverse effects on growth, reproduction, and behavior have also been observed in fish and birds exposed to PCBs (Bengtsson 1980; Fernie et al. 2001; Hansen et al. 1974; Haseltine and Prouty 1980; Hugla and Thome 1999; Peakall and Peakall 1973; Platonow and Reinhart 1973). Exposure to some PCB mixtures by workers through inhalation or dermal contact in humans can result in respiratory tract symptoms, gastrointestinal effects, mild liver effects, and effects on the skin and eyes such as chloracne, skin rashes, and eye irritation (ATSDR 2000). EPA has classified PCBs as a Group B2, probable human carcinogen (EPA 2018).

- **Polychlorinated terphenyls (PCTs)** are similar to high chlorinated PCBs in that they are stable, and bioaccumulate through food webs and are ubiquitous in the environment, including soil, sediment, and biological tissues. Toxicity of PCTs is also similar to those of PCBs. Adverse effects associated with chronic exposure to PCTs include liver damage, incidence of tumors, endocrine disruption, immunosuppression, and other reproductive effects (Jensen and Jorgensen 1983). In laboratory studies, PCT exposure was associated with reduction in growth, liver toxicity, and developmental effects (WHO 1993).
- **Indicator Bacteria** serve as surrogates used to measure the potential presence of fecal material and associated fecal pathogens. Fecal bacteria, such as fecal coliform and *Enterococcus*, are from the intestinal flora of warm-blooded animals and their presence in surface water are used as an indicator of human pathogens. Pathogens can cause illness in recreational water uses, however the detection and enumeration of all pathogens present is impractical in most circumstances. Indicator bacteria may not cause illness directly, but have demonstrated characteristics that make them indicators of potentially harmful pathogens in waterbodies. For example, fecal coliform bacteria in high quantities suggest the presence of disease-carrying organisms. Waters with high levels of fecal coliform bacteria increases the chance of developing illness including fever, nausea or stomach cramps. Diseases and illnesses that can be contracted in water with high fecal coliform counts include typhoid fever, hepatitis, gastroenteritis, dysentery and ear infections.
- **Pesticide** exposure in humans, wildlife, fish and other aquatic animals can result in toxicological effects depending on the biological availability, concentration, biomagnification, and persistence of pesticides in the environment, as well as the exposure conditions. Pesticides can cause both acute and chronic adverse effects. Some pesticides, such as the organophosphates and carbamates, affect the nervous system. Others may irritate the skin or eyes, while some pesticides may be carcinogens and others may affect the hormone or endocrine system in the body. Pesticides such as DDT and dieldrin are documented to cause eggshell thinning and have reproductive effects in avian species.
- **Diazinon** is an insecticide that breaks down relatively quickly in the environment and therefore is not likely to accumulate in animal tissues (ATSDR 2008). Diazinon is highly toxic to terrestrial wildlife, freshwater fish and invertebrates, and insects (EPA 2008). Exposure to lower levels of diazinon in animals, including aquatic species, can cause non-lethal impacts on the central nervous system which can result in a variety of health effects (e.g., restlessness, depressed respiration, anxiety, depression, and seizures). Similarly, human health effects from exposure to diazinon may include neurological effects (e.g., nausea, dizziness, muscle twitching, etc.)

although diazinon is also considered a potential endocrine disruptor. Applications of diazinon have resulted in bird kills and high levels of exposure in laboratory studies have resulted in reduced survival, reduced growth and reproductive impairment (Eisler 1986).

Beneficial Uses

The San Diego Regional Water Quality Control Board (RWQCB), which establishes region-wide and water-body-specific beneficial uses in the San Diego Basin Plan, has set numeric and narrative water quality objectives for several pollutants as well as parameters for specific surface waters in its region. The beneficial uses for surface waters in each planning district are shown in Table 4.8-3.

Table 4.8-3. Beneficial Uses for Surface Waters or Water Bodies with the Potential to Be Affected by the PMPU

	Planning District(s)	Designated Beneficial Uses
San Diego Bay	PD1, PD2, PD3, PD4, PD7, PD9, PD10	Industrial service supply; navigation; contact recreation; non-contact recreation; commercial and sport fishing; preservation of biological habitats of special significance; estuarine habitat; wildlife habitat; rare, threatened, or endangered species; marine habitat; fish migration; fish spawning; and shellfish harvesting
Chollas Creek	PD4	Contact water recreation (potential use), non-contact recreation, warm freshwater habitat, and wildlife habitat
Switzer Creek	PD4	Contact water recreation (potential use), non-contact recreation, warm freshwater habitat, and wildlife habitat (identified based on beneficial uses of “unnamed intermittent coastal streams” because Switzer Creek is not identified by name in the Basin Plan)
Otay River	PD7	Industrial service supply (potential use), contact water recreation (potential use), agricultural supply, non-contact recreation, warm freshwater habitat, wildlife habitat, preservation of rare, threatened, or endangered species
Pacific Ocean	PD8	Industrial service supply; navigation; contact water recreation; non-contact recreation; commercial and sport fishing; marine habitat; wildlife habitat; aquaculture; preservation of biological habitats of special significance; rare, threatened, or endangered species; migration of aquatic organisms; spawning; reproduction; and/or early development and shellfish harvesting

Source: San Diego RWQCB 2011.

As indicated within Chapter 3, PD5 and PD6 are not part of the proposed PMPU and are not analyzed within this PEIR. Water bodies within these two planning districts include Paradise Creek, Telegraph Creek, and Sweetwater River.

Water Quality Impairments and Total Maximum Daily Loads

Section 303(d) of the Clean Water Act (CWA) requires that the states make a list of waters that are not attaining standards after technology-based limits are put into place. For waters on this list (“303(d) List”), the states must develop total maximum daily loads (TMDLs). A TMDL is a calculation of the loading capacity of a specific pollutant that can be assimilated by a water body without impairing its designated beneficial uses. The current 303(d) list for California is from 2016 (updated from the 2014 Integrated Report). No indication of the next update to the 303(d) list was located; therefore, information below represents the most up to date information.

San Diego Bay

The entire Bay is listed on the 303(d) list for impairments from PCBs, mercury, and PAHs.

PCBs were first listed for in 2006. Sources of PCBs include contaminated sediments, dredging, historic land uses, illegal dumping, spills, urban runoff, and other unknown sources. A health advisory is in effect against consuming certain fish due to elevated levels of PCBs in fillet tissue (CalEPA 2018).

Mercury was first listed in 2014. Sources of Mercury include contaminated sediments, historic land uses, urban runoff, atmospheric deposition, and other unknown sources. A health advisory is in effect against consuming edible resident fish due to elevated levels of mercury in fillet tissue.

PAHs were first listed in 2014. Sources of PAHs include fueling operations, presence of creosote-coated pilings, presence in stormwater runoff entering the Bay, and combustion of PAH-containing products including gasoline and diesel engines.

Planning District 1: Shelter Island

Planning District 1 contains a few areas with impaired water quality, and two TMDLs are currently in place. Levels of dissolved copper in the Shelter Island Yacht Basin have been found to exceed numeric water quality objectives for copper and narrative objectives for toxicity and pesticides. Total coliform, fecal coliform, and *Enterococcus* densities along 0.4 mile of impaired shoreline within Shelter Island Shoreline Park have been found to exceed water quality objectives as well. America's Cup Harbor is also impaired for copper.

TMDLs were developed to meet water quality objectives at Shelter Island Yacht Basin and Shelter Island Shoreline Park and protect beneficial uses, but a TMDL has not yet been developed for America's Cup Harbor.

Shelter Island Yacht Basin TMDL for Dissolved Copper

Levels of dissolved copper in Shelter Island Yacht Basin have been found to exceed numeric water quality objectives for copper and narrative objectives for toxicity and pesticides.

Resolution R9-2005-0019 was adopted by the San Diego RWQCB, which incorporated a TMDL for dissolved copper in the Shelter Island Yacht Basin portion of San Diego Bay. The primary sources of copper have been identified as the passive leaching of copper antifouling paint and the in-water cleaning of the hulls coated with copper antifouling paints. Copper discourages fouling organisms such as barnacles and algae, but also slowly leaches into the water column and may also be released from the hull as particles that fall to the sediment. The copper in the paint is registered in California by the Department of Pesticide Regulation as a biocide that leaches into the water, causing contamination that may be harmful to marine life (District 2018c).

This TMDL requires loading of dissolved copper into the water column to be reduced by 76 percent, from the baseline of 2,163 kilograms per year (kg/yr) to 520 kg/yr over a 17-year period (RWQCB 2005). This time period extends to 2022, based on the official Shelter Island Yacht Basin TMDL, approved on February 9, 2005. The TMDL requires incremental reductions in dissolved copper loading of 10 percent within 7 years (2012), 40 percent within 12 years (2017), and 76 percent within 17 years (2022).

Shelter Island Shoreline Park in San Diego Bay TMDL for Indicator Bacteria

Resolution R9-2008-0027 was adopted as an amendment to the Water Quality Control Plan for the San Diego Basin (Basin Plan) to incorporate the TMDL for indicator bacteria in Shelter Island Shoreline Park in San Diego Bay. Total coliform, fecal coliform, and *Enterococcus* densities along 0.4 mile of impaired shoreline within Shelter Island Shoreline Park have been found to exceed water quality objectives. Sources of indicator bacteria include municipal separate storm sewer system (MS4) discharges, urban runoff, and natural and background sources of bacteria under both wet and dry conditions.

Planning District 2: Harbor Island

The San Diego East and West Harbor Basins in PD2 are 303d listed as impaired for copper. In addition, PD2 activities include marina operations, which have been associated with elevated levels of copper and zinc. Former PD2 activities include industrial operations, which have been associated with PCB, Mercury, and other contamination.

As detailed in Section 4.7, *Hazards and Hazardous Materials*, PD2 has several sites with contaminated bay sediments subject to regulatory action.

The former Teledyne Ryan (TDY) site located in PD2 resulted in two impacted areas. The first area is the TDY Convair Lagoon site which was capped by TDY in 1998, and the cap is currently maintained and monitored by TDY pursuant to waste discharge requirements issued by the San Diego RWQCB. The second TDY impact site is located in PD3 and described in further detail below.

In addition, the RWQCB issued Cleanup and Abatement Order No. R9-2017-0021 to Lockheed Martin Corporation to cleanup and abate the effects of waste discharged from the former Tow Basin and the former marine terminal and railway facilities into the San Diego East Basin. The RWQCB has also issued Investigative Order No. R9-2011-0064 to investigate bay sediments at the Sunroad Resort Marina based on the discharge of copper and zinc from boat hulls in the marina.

Planning District 3: Embarcadero

San Diego Bay at the B Street/Broadway Piers and Downtown Anchorage in PD3 is 303d listed as impaired by contaminated sediment (PCBs, PAHs, chlordane, and zinc), and Marriott Marina is 303d listed as impaired by copper due to passive leaching of copper antifouling paint and the in-water cleaning of hulls coated with copper antifouling paints.

In addition, as detailed in Section 4.7, PD3 has four areas with the potential for contaminated bay sediments where San Diego RWQCB Investigative Orders (IOs) were issued. One is the downtown anchorage area along Harbor Drive. This area is impacted by) the contaminants of concern that include metals, volatile organic compounds (VOCs), PCBs, PAHs, and total petroleum hydrocarbons (TPH), which have impacted soil, soil vapor, groundwater, and bay sediments. A portion of the downtown anchorage area underwent remediation in 2018. Multiple investigations are underway.

PD3 also includes the former Campbell Shipyard remediation site, located south of Embarcadero Marina Park South and north of TAMT. This site was remediated in 2008. The remediation of contaminated sediments within this former shipyard was accomplished by capping to prevent the release of solvents, PCBs, and metals from previous shipyard activities that had impacted sediments and surface water.

Planning District 4: Working Waterfront

San Diego Bay near Chollas Creek and near Coronado Bridge in PD4 are both listed as 303d impaired for sediment toxicity. In addition, as detailed in Section 4.7, PD4 has three sites with the potential for contaminated bay sediments. These three sites recently underwent San Diego RWQCB-directed contaminated sediment investigations per IOs that were sent to responsible parties in 2017. These IOs are referred to as (from north to south): (1) TAMT IO, (2) Continental Maritime Shipyard IO, and (3) BAE-SDG&E IO. The contaminants of concern for these investigations are PCBs and PCTs, metals, PAHs, and pesticides. Site investigations included both in-bay and upland contaminant characterization. Site investigation results for all three IOs were reported to the San Diego RWQCB in 2019 and 2020.

Chollas Creek TMDL for Diazinon

Resolution R9-2002-0123 was adopted by the San Diego RWQCB, which incorporated a TMDL for the organophosphate pesticide diazinon in Chollas Creek Watershed. The San Diego RWQCB adopted the TMDL on August 14, 2002. The State Water Resources Control Board (SWRCB) approved the TMDL on July 16, 2003. Diazinon is an organophosphate insecticide common in indoor, residential, landscape, and agricultural applications. In 2004, the sale of diazinon was banned for residential applications. It has been reported that there were no diazinon exceedances of waste load allocations for several years following TMDL implementation (Chollas Watershed Comprehensive Load Reduction Plan, 2012). Urban stormwater flows appear to be a primary source of diazinon to Chollas Creek. A diazinon TMDL was developed to meet the toxicity water quality objective in Chollas Creek, ensuring that water quality with respect to diazinon supports the aquatic life beneficial uses of the creek.

Chollas Creek TMDLs for Dissolved Copper, Lead, and Zinc

On June 13, 2007, the San Diego RWQCB adopted Resolution No. 2008-0054 (Chollas Creek Metals TMDLs) to address issues related to the toxicity caused by metals, which affects aquatic life in Chollas Creek. The resolution approved an amendment to the Basin Plan to incorporate TMDLs for dissolved copper, lead, and zinc in Chollas Creek. Concentrations of copper and zinc during storm events have exceeded acute and chronic criteria, while concentrations of cadmium and lead have exceeded chronic, and periodically exceeded acute, criteria. This TMDL requires that loading of copper, lead, and zinc be reduced to meet the water quality objectives of the California Toxics Rule (CTR), within 20 years from the order's effective date. On February 8, 2017, the San Diego RWQCB adopted Resolution No. R9-2017-0015 amending the San Diego Basin Plan to incorporate site specific water effect ratios (WERs) into water quality objectives for toxic pollutants and TMDLs for copper and zinc in Chollas Creek. This Basin Plan Amendment was approved by the SWRCB on September 17, 2019 and by the Office of Administrative Law on March 5, 2020. The EPA approved the TMDL Basin Plan Amendment on March 26, 2020.

Twenty Beaches and Creeks TMDL for Indicator Bacteria (includes Chollas Creek)

On February 10, 2010, the San Diego RWQCB adopted Resolution No. R9-2010-0001, an amendment incorporating Revised Bacteria TMDLs Project I, which includes Chollas Creek, into the San Diego Basin Plan. This TMDL Basin Plan amendment was subsequently approved by the SWRCB on December 14, 2010. Fecal bacteria originate from the intestinal biota of warm-blooded animals, and their presence in surface water is used as an indicator of human pathogens. Full implementation of the TMDLs for indicator bacteria must be completed within 10 to 20 years from the effective date of

the Basin Plan amendment. The compliance schedule for implementing the load and waste load reductions required to achieve the wet weather and dry weather TMDLs is phased in over time.

Planning District 7: South Bay

Planning District 7 does not have open cases associated with bay water quality or bay sediment contamination, and there are no TMDLs in place.

Planning District 8: Imperial Beach Oceanfront

The coastal shoreline within PD8 has been identified as impaired with PCBs, indicator bacteria, and trash and is on the 303(d) list. Trash is being addressed by action other than TMDL (collective effort of public, agencies, organizations, and permittees) with methods that include street sweeping, education programs on littering, and installation of trash-catching devices on storm drains. Additionally, sewage infrastructure inadequacies in the Tijuana River Watershed have created recurring sewage pollution problems on both sides of the California/Mexico border. Sewage flows can degrade adjacent coastal waters and pose public health risks. Sewage flows from the Tijuana River Watershed impact PD8. Recent events related to sewage releases in the Tijuana River Watershed are described below.

- In February 2017 untreated sewage was released into the Tijuana River Valley via the main channel of the river.
- On March 2, 2017, the San Diego RWQCB's Executive Officer sent a letter to the U.S. and Mexican International Boundary and Water Commission (IBWC) in response to the large cross-border release of untreated sewage in February 2017. The letter included recommendations with respect to improved communication, infrastructure, and water quality monitoring.
- On April 3, 2017, the IBWC released an investigative report entitled *Report of Transboundary Bypass Flows into the Tijuana River*, which was produced in response to the February 2017 incident. It was determined that 28 million gallons of untreated sewage were discharged into the Tijuana River from February 6–23, 2017, while the Tijuana municipal utilities department (Comisión Estatal de Servicios Públicos de Tijuana, CESPT) made repairs to the sewage collection system in central Tijuana.
- On May 14, 2018, the San Diego RWQCB and the California Attorney General, on behalf of the people of California, filed a Notice of Intent to Sue the United States Section of the IBWC for violations of the Clean Water Act related to transboundary discharges of waste.
- On March 2, 2018, the District, the City of Imperial Beach, and the City of Chula Vista, filed a Notice of Intent to sue the United States Section of the IBWC for discharges without a National Pollution Discharge Elimination System (NPDES) Permit, discharges in violation of a NPDES Permit, and endangerment under the Resource Conservation and Recovery Act.
- On February 5, 2020, the San Diego RWQCB issued Investigative Order No. R9-2020-0030, which requires the United States Section of the IBWC to submit technical reports pertaining to the investigation of pollution, contamination, and nuisance from transboundary flows in the Tijuana River Valley.
- On May 12, 2021, the San Diego RWQCB adopted Tentative Order No. R9-2021-0001, reissuing Waste Discharge Requirements for the United States Section of the International Boundary and

Water Commission, South Bay International Wastewater Treatment Plant, Discharge to the Pacific Ocean through the South Bay Ocean Outfall, San Diego County (NPDES No. CA0108928).

- On May 12, 2021, the San Diego RWQCB also adopted the revised Tentative Cease and Desist Order (CDO) for the United States Section of the International Boundary and Water Commission (USIBWC) South Bay International Wastewater Treatment Plant (SBIWTP) discharge to the Pacific Ocean through the South Bay Ocean Outfall (Tentative CDO No. R9-2021-0107). The Tentative CDO addresses discharges from the South Bay International Wastewater Treatment Plant that are taking place in violation of the requirements of Order No. R9-2014-0009 and threatening to take place in violation of the requirements of Tentative Order No. R9-2021-001.

Planning District 9: Silver Strand

Planning District 9 includes Coronado Cays, which is impaired for copper from the passive leaching of copper antifouling paint and the in-water cleaning of hulls coated with copper antifouling paints. Planning District 9 does not have open cases associated with bay sediment contamination.

Planning District 10: Coronado Bayfront

Planning District 10 includes a copper impairment at Glorietta Bay, from the passive leaching of copper antifouling paint and the in-water cleaning of hulls coated with copper antifouling paints, as well as an impairment for indicator bacteria at Tidelands Park. Planning District 10 does not have open cases associated with bay sediment contamination.

Table 4.8-4 lists CWA Section 303(d)-listed receiving water bodies and associated pollutant impairments within the planning districts.

Table 4.8-4. 303(d)-Listed Impairments for Water Bodies Within the Planning Districts

Water Body	303(d)-Listed Impairments	Potential Source	Estimated TMDL Completion ¹
Baywide			
San Diego Bay	Organic compounds (PCBs), PAHs, Mercury	Contaminated Sediment, dredging, historic land management activities, illegal dumping, spills, urban runoff/storm sewers	2019
		Source unknown	2025
		Atmospheric deposition, contaminated sediments, historic land management, other urban runoff, and source unknown	2027
Planning District 1: Shelter Island			
Shelter Island Yacht Basin	Dissolved copper	Copper-based antifouling paints used on boats	February 9, 2005
Shelter Island Shoreline Park in San Diego Bay	Indicator bacteria	Urban runoff; stormwater runoff	June 11, 2008
San Diego Bay Shoreline	Metals (copper)	Copper-based antifouling paints used on boats	2019

Water Body	303(d)-Listed Impairments	Potential Source	Estimated TMDL Completion¹
(Americas Cup Harbor)			
Planning District 2: Harbor Island			
San Diego Bay Shoreline (Harbor Island-East Basin)	Metals (copper)	Copper-based antifouling paints used on boats	2019
San Diego Bay Shoreline (Harbor Island-West Basin)	Metals (copper)	Copper-based antifouling paints used on boats	2019
Planning District 3: Embarcadero			
San Diego Bay (Downtown Anchorage)	Benthic community effects and sediment toxicity (PCBs, PAHs, and chlordane)	Contaminated sediment	2019
San Diego Bay (B Street/Broadway Piers)	Benthic community effects, sediment toxicity (PCBs, PAHs, and zinc), and indicator bacteria	Contaminated sediment	2019
San Diego Bay Shoreline (Marriott Marina)	Metals (copper)	Copper-based antifouling paints used on boats	2019
San Diego Bay Shoreline (G Street Pier)	Indicator bacteria	Unknown	2025
Planning District 4: Working Waterfront			
Beaches and Creeks (Chollas Creek)	Indicator bacteria	Unknown	February 01010, 2010
Chollas Creek	Diazinon	Unknown	August 14, 2002
Chollas Creek	Copper, lead, and zinc	Unknown	June 13, 2007
Chollas Creek	Bifenthrin	Unknown	2027
	chloropyrifos		2025
	cypermethrin		2025
	malathion		2025
	nitrogen		2019
	phosphorus		2019
	trash		2021
San Diego Bay Shoreline (between Sampson and 28 th Streets)	Metals (copper, mercury, zinc) and organic compounds (PAHs, PCBs)	Nonpoint source, point source, major industrial point source, unknown nonpoint source, urban runoff/storm sewers, source unknown	2015 2013

Water Body	303(d)-Listed Impairments	Potential Source	Estimated TMDL Completion¹
San Diego Bay Shoreline (near Chollas Creek)	Benthic community effects and sediment toxicity	Unknown nonpoint and point	2010
San Diego Bay Shoreline (near Coronado Bridge)	Benthic community effects and sediment toxicity	Unknown	2019
San Diego Bay Shoreline (Switzer Creek)	Pesticides (chlordane) and organic compounds (PAHs)	Unknown	2019
Planning District 7: South Bay			
N/A	N/AN/A	N/AN/A	N/AA
Planning District 8: Imperial Beach Oceanfront			
Pacific Ocean Shoreline, Imperial Beach Pier	Organic compounds (PCBs), indicator bacteria, trash	Unknown	2019
Planning District 9: Silver Strand			
San Diego Bay Shoreline (Coronado Cays)	Metals (copper)	Copper-based antifouling paints used on boats	2019
Planning District 10: Coronado Bayfront			
San Diego Bay Shoreline (at Glorietta Bay)	Metals (copper)	Copper-based antifouling paints used on boats	2019
San Diego Bay Shoreline (Tidelands Park)	Indicator bacteria	Unknown	2021

Source: State Water Resources Control Board 2014, 2016.

¹ The TMDL completion dates listed in this table represent the dates in which the San Diego RWQCB was to have adopted the TMDLs and not the completion of full implementation of the TMDL and subsequent reductions of pollutant loads.

4.8.2.4 Groundwater

Groundwater is the water found underground in the cracks and spaces in soil, sand, and rock. It is stored in and moves slowly through geologic formations of soil, sand, and rocks called aquifers. For the most part, groundwater within the region occurs in alluvial aquifers, residuum (crystalline bedrock that has weathered in place), aquifers composed of semi-consolidated or consolidated sediments, and fractured crystalline rock. Sources of groundwater recharge in the region include creeks, precipitation, discharges from treatment plants, underflow from dams, and return flow.

The proposed PMPU area is within the Mission Valley Groundwater Basin and Coastal Plain of San Diego Groundwater Basin.⁵ The Mission Valley Groundwater Basin underlies an east-west trending

⁵ Planning Districts 9 and 10 are not within a groundwater basin designated by DWR or in the San Diego Basin Plan.

valley, which empties into the San Diego River. The basin is bounded by the contacts of alluvium with the semi-permeable San Diego and Poway Formations and the impermeable Lindavista Formation. The southwestern boundary is the San Diego Bay. The average well production is about 1,000 gallons per minute (gpm), and the average specific yield is about 15 percent (DWR 2004a). Planning District 2 and a portion of PD3 are within the Mission Valley Groundwater Basin.

In 2016, Sweetwater Authority and City of San Diego Public Utilities Department collectively submitted an application to the State Department of Water Resources (DWR) to recognize the San Diego Formation aquifer system as an official groundwater basin of the state, and to consolidate into that basin the boundaries of three DWR-recognized alluvial groundwater basins: Lower Sweetwater River Valley, Otay River Valley, and Tijuana River Valley. DWR approved the application, and designated the new consolidated basin as the Coastal Plain of San Diego Basin (Basin 9-033) (DWR 2018a). The Coastal Plain of San Diego groundwater basin underlies the Cities of San Diego, National City, Chula Vista, Imperial Beach, and San Ysidro in southwestern San Diego County. The basin boundary represents the area underlain by the San Diego Formation. The basin is bound on the west by San Diego Bay and the Pacific Ocean. The basin is bound on the south by the international border with Mexico and is bound on the north by the alluvium of the Mission Valley Basin. The basin is bound on the east by the La Nacion fault and the lateral extents of the San Diego Formation and the alluvial areas in Otay Valley and Sweetwater Valley. The surface waters are drained westerly towards the Pacific Ocean by the Sweetwater River, the Otay River, the Tijuana River, and various creeks (DWR 2018b). A portion of PD3 and all of PD4, PD7, and PD8 are within the Coastal Plain of San Diego Groundwater Basin.

The groundwater quality in these basins is predominantly brackish. The coastal zone of San Diego County is mostly supplied with imported water from member agencies of the San Diego County Water Authority. Groundwater production is limited by a number of factors, including the limited geographic extent of the more productive sand and gravel (alluvial) aquifers, relatively shallow nature of most of the alluvial aquifers, lack of rainfall, and groundwater recharge and degraded water quality issues. Although groundwater opportunities are limited, groundwater is currently used to meet a portion of the municipal water demands outside of the District's jurisdiction.

Planning District 1: Shelter Island

Planning District 1 is located over the Mission Valley Groundwater Basin (Basin #9-14) in the San Diego Formation, as identified by the California Department of Water Resources, and is within the Pueblo San Diego HU. The average depth to groundwater within PD1 ranges from 4.78 to 9.26 feet. According to the 2016 San Diego Region Basin Plan, no beneficial uses are designated for the groundwater within the Pueblo San Diego HU, and the area has been exempted by the RWQCB from the municipal use designation. Water quality issues include Total Dissolved Solids (TDS) that exceed 3,000 milligrams per liter (mg/L) and basin contamination that cannot reasonably be treated for domestic use. The aquifer is regulated as a geothermal energy producing source, and the water source does not provide sufficient water to sustain a yield of 200 gallons per day (gpd).

Planning District 2: Harbor Island

Planning District 2 is located over the Mission Valley Groundwater Basin (Basin #9-14) in the San Diego Formation, as identified by the California Department of Water Resources, and is within the Pueblo San Diego HU. The average depth to groundwater within PD2 ranges from 7.44 to 13.18 feet. According to the 2016 San Diego Region Basin Plan, no beneficial uses are designated for the

groundwater within the Pueblo San Diego HU, and the area has been exempted by the RWQCB from the municipal use designation. Water quality issues include TDS that exceed 3,000 mg/L and basin contamination that cannot reasonably be treated for domestic use. The water source does not provide sufficient water to sustain a yield of 200 gpd, and the aquifer is regulated as a geothermal energy producing source.

Planning District 3: Embarcadero

Planning District 3 is located over the Mission Valley Groundwater Basin (Basin #9-14) in the San Diego Formation and the Coastal Plain of San Diego Groundwater Basin (Basin #9-033), as identified by the California Department of Water Resources, and is within the Pueblo San Diego HU. The average depth to groundwater recorded at the Lane Field site was approximately 8 feet. According to the 2016 San Diego Region Basin Plan, no beneficial uses are designated for the groundwater within the Pueblo San Diego HU, and the area has been exempted by the RWQCB from the municipal use designation. Water quality issues include TDS that exceed 3,000 mg/L and basin contamination that cannot reasonably be treated for domestic use. The water source does not provide sufficient water to sustain a yield of 200 gpd, and the aquifer is regulated as a geothermal energy producing source.

Planning District 4: Working Waterfront

Planning District 4 is located over the Coastal Plain of San Diego Groundwater Basin (Basin #9-033), as identified by the California Department of Water Resources, and is within the Pueblo San Diego HU. The average depth to groundwater within PD4 ranges from 6.17 to 11.7 feet. According to the 2016 San Diego Region Basin Plan, no beneficial uses are designated for the groundwater within the Pueblo San Diego HU, and the area has been exempted by the RWQCB from the municipal use designation. Water quality issues include TDS that exceed 3,000 mg/L and basin contamination that cannot reasonably be treated for domestic use. The water source does not provide sufficient water to sustain a yield of 200 gpd, and the aquifer is regulated as a geothermal energy producing source.

Planning District 7: South Bay

Planning District 7 is located over the Coastal Plain of San Diego Groundwater Basin (Basin #9-033), as identified by the California Department of Water Resources, and is within the Otay Valley HU. According to the 2016 San Diego Region Basin Plan, beneficial uses of groundwater in the Otay Valley HU include municipal and domestic supply (MUN), agricultural supply (AGR) and industrial service supply (IND). The average depth to groundwater ranges from 5.5 to 32.6 feet.

Planning District 8: Imperial Beach Oceanfront

Planning District 8 is located over the Coastal Plain of San Diego Groundwater Basin (Basin #9-033), as identified by the California Department of Water Resources, which is within the Otay and Tijuana HUs. The average depth to groundwater ranges from 19.5 to 32.6 feet. According to the 2016 San Diego Region Basin Plan, no beneficial uses are designated for the groundwater within the hydrologic areas and subareas within PD8, and the area has been exempted by the RWQCB from the municipal use designation. Water quality issues include TDS that exceed 3,000 mg/L and basin contamination that cannot reasonably be treated for domestic use. The water source does not provide sufficient water to sustain a yield of 200 gpd, and the aquifer is regulated as a geothermal energy producing source.

Planning District 9: Silver Strand

Planning District 9 is located in the San Diego Formation, and is not located over an identified groundwater basin, as identified by the California Department of Water Resources. The average depth to groundwater ranges from 5 to 20 feet. According to the 2016 San Diego Region Basin Plan, no beneficial uses are designated for the groundwater underneath PD9, and the area has been exempted by the RWQCB from the municipal use designation. Water quality issues include TDS that exceed 3,000 mg/L and basin contamination that cannot reasonably be treated for domestic use. The water source does not provide sufficient water to sustain a yield of 200 gpd, and the aquifer is regulated as a geothermal energy producing source.

Planning District 10: Coronado Bayfront

Planning District 10 is in the San Diego Formation, and is not located over an identified groundwater basin, as identified by the California Department of Water Resources. The average depth to groundwater within PD10 is generally between 5 and 10 feet. According to the 2016 San Diego Region Basin Plan, no beneficial uses are designated for the groundwater underneath PD10, and the area has been exempted by the RWQCB from the municipal use designation. Water quality issues include TDS that exceed 3,000 mg/L and basin contamination that cannot reasonably be treated for domestic use. The water source does not provide sufficient water to sustain a yield of 200 gpd, and the aquifer is regulated as a geothermal energy producing source.

4.8.3 Laws, Regulations, Plans, and Policies

This section provides an overview of pertinent Federal, State, and local laws and regulations governing hydrology and water quality for the proposed PMPU.

4.8.3.1 Federal

Federal Emergency Management Agency Regulations

FEMA administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations, which limit development in floodplains. FEMA also prepares FIRMs that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA's minimum level of flood protection for new development is the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year. In addition, FEMA has developed requirements and procedures for evaluating earthen levee systems and mapping the areas affected by those systems. Levee systems are evaluated for their ability to provide protection from 100-year flood events, and the results of this evaluation are documented in the FEMA Levee Inventory System. Levee systems must meet minimum freeboard standards and must be maintained according to an officially adopted maintenance plan. Other FEMA levee system evaluation criteria include structural design and interior drainage.

Clean Water Act

The primary goals of the CWA are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and make all surface waters fishable and swimmable. The EPA is the lead Federal agency responsible for water quality management. The CWA (33 United States Code Sections 1251–1387) amended the Federal Water Pollution Control Act of 1972 and is the primary Federal law that governs and authorizes water quality control activities by EPA as well as the states. The Federal CWA of 1977 established the basic structure for regulating discharges of pollutants into the waters of the United States (not including groundwater). Under the CWA, it is unlawful for any person to discharge any pollutant from a point source into navigable waters, unless an NPDES permit is obtained and implemented. In addition, the CWA requires the states to adopt water quality standards for receiving water bodies and have those standards approved by EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing), along with the water quality criteria necessary to support those uses.

CWA Section 303: Impaired Water Bodies (303(d) list) and Total Maximum Daily Loads

Under Section 303(d) of the CWA, the SWRCB is required to develop a list of impaired water bodies that do not meet water quality standards (promulgated under the National Toxics Rule [NTR] or the CTR) after the minimum technology-based effluent limitations have been implemented for point sources. Lists are to be priority ranked for development of a TMDL. A TMDL is a calculation of the total maximum amount of a pollutant that a water body can receive on a daily basis and still safely meet water quality standards. The California RWQCBs and EPA are responsible for establishing TMDL waste-load allocations and incorporating improved load allocations into water quality control plans, NPDES permits, and waste discharge requirements (WDRs). Section 305(b) of the CWA requires states to assess the status of water quality conditions and submit a report every 2 years. Both CWA requirements are addressed through development of a 303(d)/305(b) Integrated Report, which will provide both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The SWRCB developed a statewide 2014 and 2016 California Integrated Report that was based on the Integrated Reports from each of the nine RWQCBs. The 2014 and 2016 California Integrated Report was approved by the SWRCB on October 3, 2017, and EPA issued its final decision and approval of the California 303(d) list on April 6, 2018.

Section 401: Water Quality Permits

Under Section 401 of the CWA, an applicant proposing to conduct any activity that may result in any discharge into waters of the United States must first obtain a Section 401 Water Quality Certification from the appropriate state agency, stating that the discharge is consistent with the state's water quality standards and criteria. In California, the authority to grant a water quality certification or waive the requirement is delegated by the SWRCB to the nine RWQCBs. A Section 401 Water Quality Certification is required for any activities requiring a Section 404 permit to discharge dredged or fill material into waters of the United States. In addition, an applicant under Section 10 of the Rivers and Harbor Act must also obtain a Section 401 Water Quality Certification.

Section 402: National Pollutant Discharge Elimination System Permits

Section 402(p) of the CWA was amended in 1987 to require EPA to establish regulations for permitting municipal and industrial (including active construction sites) stormwater discharges

under the NPDES permit program. The NPDES program requires all industrial facilities and municipalities of a certain size that discharge pollutants into waters of the United States to obtain a permit. Stormwater discharges in California are commonly regulated through general and individual NPDES permits, which are adopted by the SWRCB or RWQCBs and administered by the RWQCBs. EPA requires NPDES permits to be revised to incorporate waste-load allocations for TMDLs when the TMDLs are approved (40 Code of Federal Regulations [CFR] 122).

NPDES permits generally identify effluent and receiving water limits for allowable concentrations and/or mass emissions of pollutants contained in a discharge; prohibitions on discharges that were not specifically allowed under the permit; and provisions that describe required actions to be taken by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, toxicity testing or other activities.

Section 404: Permits for Dredged or Fill Material

Under Section 404, the U.S. Army Corps of Engineers (USACE) and EPA regulate the discharge of dredged and fill materials into waters of the United States. These waters are defined primarily as navigable waterways or water features (including wetlands) that have a significant nexus to navigable waters. Project sponsors must obtain authorization from USACE for all discharges of dredged or fill materials into waters of the United States before proceeding with a proposed activity. Individual Section 404 permits may be issued only for a least environmentally damaging practicable alternative. Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. USACE cannot issue an individual permit or verify the use of a general permit until the requirements of the National Environmental Policy Act of 1969, Endangered Species Act, Coastal Zone Management Act, and National Historic Preservation Act have been met. In addition, no permit can be issued or verified until a water quality certification, or waiver of certification, has been issued pursuant to CWA Section 401.

Section 404 of the CWA provides for the issuance of dredge/fill permits by the USACE. Permits are typically conditioned to minimize impacts on water quality. Conditions typically include, but are not limited to, the following:

- USACE review and approval of sediment quality analysis prior to dredging. Sediments are tested using approved EPA protocols.
- Detailed pre- and post-construction monitoring plan that includes disposal site monitoring.
- Timing and water quality restrictions on flow back of dredged water at the dredging site with flow-back water meeting RWQCB Waste Water Discharge and Receiving Water Monitoring Program requirements.
- Compensation for loss of wetlands.

As part of this regulatory/permitting process, monitoring requirements include measurements of water quality parameters such as dissolved oxygen, light transmittance (turbidity), pH, and suspended solids at varying distances from the dredging operations. In the unlikely event that dredging activities exceed any of the monitoring levels, the dredging permit would include corrective actions such as use of silt curtains and requiring a slower dredge bucket speed, which would be implemented if the monitoring data indicate that water quality conditions outside of the silt curtain or mixing zone exceed the permit-specified limits.

Section 10 of the Rivers and Harbors Act of 1899

The Rivers and Harbors Act is the primary Federal law regulating activities that may affect navigation on the nation's waterways. Section 10 of the Rivers and Harbors Act grants USACE control over obstructions to navigable waters of the United States and gives USACE exclusive authority to approve construction of smaller structures, such as wharves, and bulkheads, as well as dredging and filling operations.

4.8.3.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (embodied in the California Water Code) of 1969 (Porter-Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect its waters for the use and enjoyment of the people. Under the California Water Code, the State of California is divided into nine regions, which are governed by RWQCBs that, under the guidance and review of the SWRCB, implement and enforce provisions of the California Water Code and the CWA. The planning area is in Region 9, the San Diego region, and is governed by the San Diego RWQCB.

The Porter-Cologne Act also requires waste dischargers to notify the RWQCBs of their activities through the filing of "Reports of Waste Discharge" and authorizes the SWRCB and RWQCBs to issue and enforce WDRs, NPDES permits, Section 401 water quality certifications, and other approvals.

Section 13050 of the California Water Code defines what is considered pollution, contamination, or nuisance. Briefly defined, pollution means an alteration of water quality such that it unreasonably affects the beneficial uses of water. Contamination means an impairment of water quality to the degree that it creates a hazard to public health. Nuisance is defined as anything that is injurious to health, offensive to the senses, or an obstruction to use of a property, affecting a considerable number of people.

SWRCB Construction General Permit (Order 2009-0009-DWQ, amended by Order 2010-0014-DWQ and Order 2012-006-DWQ)

Construction activities that disturb 1 acre or more of land must obtain coverage under the SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order 2009-0009-DWQ, as amended by Order 2010-0014-DWQ and Order 2012-006-DWQ). Under the terms of the permit, applicants must file complete and accurate Notice of Intent and permit registration documents with the SWRCB. Applicants must also demonstrate conformance with applicable construction best management practices (BMPs) and prepare a construction Stormwater Pollution Prevention Plan (SWPPP), containing a site map that shows the construction site perimeter; existing and proposed buildings; lots; roadways; stormwater collection and discharge points; general topography, both before and after construction; and the drainage patterns across the project site. The Construction General Permit also includes requirements for site water quality monitoring if the project meets certain Risk Level thresholds.

The SWPPP includes measures to eliminate or reduce pollutant discharges and describes the implementation and maintenance of BMPs to control stormwater and other runoff during and after

construction. The SWPPP is required to include a menu of BMPs to be selected and implemented based on the phase of construction and the weather conditions to effectively control erosion, sediment, and other construction-related pollutants to meet the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology standards. Erosion control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap sediment once it has been mobilized. The following types of BMPs, as applicable, would be implemented during future construction activities:

Erosion Control

- Physical stabilization through hydraulic mulch, soil binders, straw mulch, bonded fiber matrices, and/or erosion control blankets (i.e., rolled erosion control products).
- Soil roughening of graded areas (through track walking, scarifying, sheepsfoot rolling, or imprinting) to slow runoff, enhance infiltration, and reduce erosion.
- Wind erosion (dust) control through the application of water or other dust palliatives as necessary to prevent and alleviate dust nuisance.

Sediment Control

- Perimeter protection through silt fences, fiber rolls, gravel bag berms, sand bag barriers, and straw bale barriers.
- Storm drain inlet protection.
- Sediment capture through sediment traps, storm drain inlet protection, and sediment basins.
- Velocity reduction through check dams, sediment basins, and/or outlet protection/velocity dissipation devices.
- Reduction in off-site sediment tracking through stabilized construction entrance/exit, construction road stabilization, and/or entrance/exit tire wash.

The Construction General Permit contains receiving water limitations that require stormwater discharges to not cause or contribute to a violation of any applicable water quality standard. Inspections of all BMPs are required throughout construction.

SWRCB Industrial General Permit (Order No. 2014-0057 DWQ)

Industrial facilities with specific standard industrial codes (SIC) that discharge stormwater to waters of the United States must obtain coverage and comply with the requirements of the General Permit for Stormwater Discharges Associated with Industrial Activities (Industrial General Permit), Order No. 2014-0057-DWQ (NPDES No. CAS000001), issued by the SWRCB. Under the Industrial General Permit, dischargers must demonstrate conformance with applicable industrial BMPs and prepare an industrial SWPPP, containing a site map that shows the site perimeter, areas where industrial activities occur, stormwater collection and discharge points, and drainage patterns across the site. The Industrial General Permit includes the required minimum BMP categories that must be implemented and maintained at industrial facilities to prevent pollutants from entering stormwater discharges or reduce their levels. Additional information on the Permit, and its requirements, including BMPs are available online.⁶ The BMPs include the following:

⁶ https://www.waterboards.ca.gov/water_issues/programs/stormwater/igp_20140057dwq.html

Good Housekeeping

- Observe all outdoor areas associated with industrial activity, including stormwater discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas affected by off-facility materials or stormwater runoff, to determine housekeeping needs. Any identified debris, waste, spills, tracked materials, or leaked materials will be cleaned and disposed of properly.
- Minimize or prevent material tracking.
- Minimize dust generated from industrial materials or activities.
- Ensure that all facility areas affected by rinse/wash waters are cleaned as soon as possible.
- Cover all stored industrial materials that can be readily mobilized by contact with stormwater.
- Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper) that can be transported or dispersed by the wind or contact with stormwater.
- Prevent disposal of any rinse/wash waters or industrial materials into the stormwater conveyance system.
- Minimize stormwater discharges from non-industrial areas (e.g., stormwater flows from employee parking area) that contact industrial areas of the facility.
- Minimize authorized non-stormwater discharges from non-industrial areas (e.g., potable water, fire hydrant testing) that contact industrial areas of the facility.

Preventive Maintenance

- Identify all equipment and systems used outdoors that may spill or leak pollutants.
- Observe the identified equipment and systems to detect leaks or identify conditions that may result in the development of leaks.
- Establish an appropriate schedule for maintenance of identified equipment and systems.
- Establish procedures for prompt maintenance and repair of equipment as well as maintenance of systems when conditions exist that may result in the development of spills or leaks.

Spill and Leak Prevention and Response

- Establish procedures and/or controls to minimize spills and leaks.
- Develop and implement spill and leak response procedures to prevent industrial materials from discharging through the stormwater conveyance system. Spilled or leaked industrial materials will be cleaned promptly and disposed of properly.
- Identify and describe all necessary and appropriate spill and leak response equipment, the location(s) of spill and leak response equipment, and spill or leak response equipment maintenance procedures.
- Identify and train appropriate personnel for spill and leak response.

Material Handling and Waste Management

- Prevent or minimize the handling of industrial materials or wastes that can be readily mobilized by contact with stormwater during a storm event.

- Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper) that can be transported or dispersed by the wind or contact with stormwater during handling.
- Cover industrial waste disposal containers and industrial material storage containers that contain industrial materials when not in use.
- Divert run-on and stormwater generated from within the facility away from all stockpiled materials.
- Clean all spills of industrial materials or wastes that occur during handling in accordance with the spill response procedures (Industrial General Permit Section X.H.1.c).
- Observe and clean, as appropriate, any outdoor material or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes.

Erosion and Sediment Controls

- Implement effective wind erosion controls.
- Provide effective stabilization for all disturbed soils and other erodible areas prior to a forecast storm event.
- Maintain effective perimeter controls and stabilize all site entrances and exits to prevent erodible materials from discharging or being tracked off the site.
- Divert run-on and stormwater generated from within the facility away from all erodible materials.
- Employee Training Program
- Ensure that all team members who implement the various compliance activities of the SWPPP are properly trained in BMP implementation, BMP effectiveness evaluations, visual observations, and monitoring activities.
- Prepare or acquire appropriate training manuals or training materials.
- Identify which personnel need to be trained, their responsibilities, and the type of training they will receive.
- Provide a training schedule.
- Maintain documentation of all completed training classes and the personnel who received training in the SWPPP.

Quality Assurance and Record Keeping

- Develop and implement management procedures to ensure that appropriate personnel implement all elements of the SWPPP, including the Monitoring Implementation Plan.
- Develop a method of tracking and recording the implementation of the BMPs identified in the SWPPP.
- Maintain BMP implementation records, training records, and records related to any spills and cleanup-related response activities for a minimum of 5 years (Industrial General Permit Section XXI.J.4). In addition to the minimum BMPs, advanced BMPs, listed below, must be implemented

and maintained to the extent feasible and necessary to reduce or prevent discharges of pollutants in stormwater discharges.

Exposure Minimization BMPs

- Storm-resistant shelters that prevent contact between stormwater and industrial materials or activities.

Stormwater Containment and Discharge Reduction BMPs

- BMPs that divert, infiltrate, reuse, contain, retain, or reduce the volume of stormwater runoff.

Treatment Control BMPs

- Implementation of one or more mechanical, chemical, biologic, or any other treatment technology that meets the treatment design standard. All new treatment control BMPs employed by the discharger to comply with advanced BMPs shall be designed to comply with design storm standards (volume or flow-based standards).

Other Advanced BMPs

- Any additional BMPs not described above that are necessary to meet the effluent limitations of the Industrial General Permit.

The associated SWPPP includes a Site Monitoring Implementation Plan, as required by the Industrial General Permit, that describes (1) the monthly dry-weather visual observation, (2) the stormwater visual observation, and (3) the facility-specific stormwater sampling program at the facility, which includes sample collection locations (discharge points), contaminants for analysis, and potential pollution sources.

When structural treatment controls are required by the Industrial General Permit, the design standard includes a volume-based treatment design that would treat the volume of runoff produced from an 85th-percentile, 24-hour storm event, as determined from local historical rainfall records. This design standard is consistent with the treatment control requirements necessary to meet the redevelopment project BMP requirements of the Municipal Stormwater Permit and District *BMP Design Manual*, as discussed under *Local* regulations in Section 4.8.3.3, below.

Public Resources Code Section 71204.5 (Ballast Water Management)

The State's Ballast Water Management regulation for vessels operating within the Pacific Coast Region is promulgated by the California State Lands Commission, pursuant to Public Resources Code Section 71204.5. The regulation established a Pacific Coast Region, defined essentially as coastal waters ranging from the Aleutian Islands to the tip of Baja California. It became effective on March 22, 2006. Vessels taking ballast from ports within this region and traveling on coastal voyages must perform a coastal exchange at a minimum distance of 50 miles out and 200 meters deep prior to discharge in California. Vessels arriving from outside an Exclusive Economic Zone, and therefore outside of the Pacific Coast Region, are still required to perform a mid-ocean exchange (at a minimum distance of 200 miles out and a minimum of 2,000 meters deep) prior to discharging into California waters.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act was enacted to better manage groundwater supplies in the state and directs local agencies (e.g., cities, counties, and water agencies) to adopt Groundwater Sustainability Plans for high- and medium-priority groundwater basins to ensure their long-term sustainability. In San Diego County, DWR has designated three of the county's basins as medium-priority and one basin as critically overdrafted. The three medium-priority groundwater basins include the San Diego River Valley, San Luis Rey Valley, and San Pasqual Valley Groundwater Basins, while the Borrego Valley is designated as critically overdrafted. These groundwater basins are all subject to Groundwater Sustainability Plan requirements of the SGMA. Within the proposed PMPU area, the Mission Valley Groundwater Basin is identified as very low priority and the Coastal Plain of San Diego Groundwater Basin is identified as low priority.

4.8.3.3 Local

Water Quality Control Plan (Basin Plan)

The preparation and adoption of water quality control plans, referred to as Basin Plans, is required by the California Water Code (Section 13240), as prescribed by the CWA. Section 303 of the CWA requires states to adopt water quality standards that “consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses.” According to Section 13050 of the California Water Code, Basin Plans designate beneficial uses to be protected, water quality objectives to be established to protect those uses, and a program of implementation needed for achieving the objectives for the waters within a specified area. A Basin Plan describes and quantifies water quality objectives that must be attained or maintained to protect beneficial uses and conform to the State's non-degradation policy. The water quality objectives are the levels of water quality constituents that must be met to protect beneficial uses. The water quality objectives designated for the waters of the San Diego Region are provided in the San Diego Basin Plan (San Diego RWQCB 2016b). Because beneficial uses, together with their corresponding water quality objectives, can be defined per Federal regulations as water quality standards, Basin Plans are regulatory references for meeting the State and Federal requirements for water quality control. To address water quality impairments TMDLs have been adopted in designated waterbodies.

Municipal Stormwater Permit (Order No. R9-2013-0001 as amended by Order Nos. R9-2015-001 and R9-2015-0100)

The Municipal Stormwater Permit (Order No. R9-2013-0001, as amended by Order Nos. R9-2015-001 and R9-2015-0100)⁷ is an NPDES permit that requires the owners and operators of MS4s within the San Diego region to implement management programs that limit discharges of pollutants and non-stormwater discharges to and from their MS4. The Municipal Stormwater Permit requires the District and other “co-permittees” to develop watershed-based Water Quality Improvement Plans (WQIPs) and Jurisdictional Runoff Management Plans (JRMP). The Municipal Stormwater Permit emphasizes watershed program planning and program outcomes. The intent of the permit is to enable each jurisdiction to focus its resources and efforts to:

- Reduce pollutants in stormwater discharges from its MS4.

⁷ https://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/sd_stormwater.html

- Effectively prohibit non-stormwater discharges to its MS4.

San Diego Bay Watershed Water Quality Improvement Plan

The Municipal Stormwater Permit requires development of the San Diego Bay WQIP. The purpose of the WQIP is to guide the municipal stormwater permit co-permittees, including the District, via its JRMP, toward improving water quality in MS4 discharges and receiving waters. In the WQIP, priorities and goals are established, and each jurisdiction identifies strategies to assist in attaining the goals. Numeric goals established in the WQIP may include multiple criteria and/or indicators designed to measure reasonable progress towards addressing the highest priority water quality conditions identified for the watershed management area. This approach establishes the foundation that the District uses to develop and implement its JRMP. The District implements the WQIP in collaboration with other local agencies that have jurisdiction within the San Diego Bay Watershed Management Area, which comprises three HUs: Pueblo San Diego, Sweetwater, and Otay. Note that the Sweetwater HU is located outside of the proposed PMPU area.

Jurisdictional Runoff Management Program

Under the Municipal Stormwater Permit, each jurisdiction is required to have a JRMP, which includes a component that addresses issues related to construction activities and a component that addresses issues related to existing development, and which requires co-permittees to establish adequate enforcement authority, develop education/outreach, and conduct monitoring. In addition, each co-permittee prepares and submits an annual report that describes program implementation and strategies to reduce the discharge of pollutants of concern to the MS4 and receiving waters to the maximum extent practicable.

The District's JRMP has been developed to meet the conditions of the Municipal Stormwater Permit and to assist the District in achieving the goals identified in the WQIP. District-specific WQIP-based strategies have been incorporated into the JRMP. The JRMP's focus is on controlling stormwater discharges to the MS4, with the overall goal of achieving improvements in receiving water quality. The District has developed a list of BMPs that are applicable to all persons, activities, and operations occurring on District Tidelands, and the JRMP utilizes District-specific jurisdictional activities and watershed-based strategies. Enforcement of the JRMP helps to prevent stormwater pollutants from entering local storm drains and, ultimately, the San Diego Bay.

Moreover, the Municipal Stormwater Permit (Provision E.4) requires the District to implement a Construction Management program in accordance with the strategies in the San Diego Bay Watershed WQIP in addition to core permit requirements. The core permit requirements include a project approval process that ensures appropriate BMPs are attached to conditions of approval for construction projects as well as ongoing construction site inventory updates and tracking and inspection. In addition, the District is required to establish minimum BMPs from the following categories: Project Planning, Non-Stormwater Management, Good Housekeeping/Waste Management, Erosion Control, Sediment Control, and Run-on and Run-off Control.

Jurisdictional Runoff Management Program BMP Standards

Best Management Practices Design Manual

As part of the District's JRMP, a *BMP Design Manual*⁸ was developed to provide guidelines for incorporating permanent post-construction BMPs into new and redevelopment projects. The *BMP Design Manual* identifies the required source-control and site-design BMPs to eliminate or reduce pollutants in stormwater runoff for all projects. For Priority Development Projects (PDPs), the *BMP Design Manual* also describes pollutant-control BMPs that must be incorporated into the site design and, where applicable, addresses potential hydromodification impacts from changes in flow and sediment supply. The *BMP Design Manual* is applicable for both tenant- and District-sponsored major maintenance or capital improvement projects, as required by the Municipal Stormwater Permit. Project proponents must submit a Storm Water Quality Management Plan (SWQMP) accurately describing how the project will meet source control site design and pollutant control BMP requirements. District staff provide technical review of and approve SWQMP documents and drainage design plans to ensure that pollutant control BMP requirements are met. The SWQMP is evaluated for compliance with the Municipal Stormwater Permit and with design criteria outlined in the District's *BMP Design Manual*. Once the approval process is complete, the project is able to commence and routine inspections are conducted throughout the duration of project construction.

Construction Best Management Practices Plan

If a project is not subject to the Construction General Permit (Order 2009-0009-DWQ, as amended by Order 2010-0014-DWQ and Order 2012-006-DWQ), a Construction BMP Plan is required pursuant to the JRMP. The Construction BMP Plan includes many of the same elements as a standard SWPPP except for most post-construction BMPs and a monitoring plan. The Construction BMP Plan applies to construction projects with less than 1 acre, but greater than 100 square feet of land disturbance, as well as construction projects that occur over water. District approval is required on all SWPPPs and Construction BMP Plans prior to any work beginning on a project. The Construction BMP Plan must identify the specific BMPs that would be implemented during construction, including temporary erosion control BMPs, temporary sediment control BMPs, temporary tracking control BMPs, temporary wind erosion control BMPs, non-stormwater management BMPs, and waste management and materials pollution control BMPs. It should be noted that the Construction BMP Plan requirements are updated regularly in accordance with regulation changes. The types of BMPs identified in the Construction BMP Plan include, but are not limited to, the following.

- Temporary erosion control BMPs
 - Preservation of existing vegetation
 - Hydraulic mulch
 - Hydroseeding
 - Straw mulch
- Temporary sediment control BMPs
 - Slit fence

⁸ Port of San Diego BMP Design Manual and Appendices are available online at: <https://www.portofsandiego.org/stormwater-management>

- Sediment basin
- Sediment trap
- Fiber rolls
- Storm drain inlet protection
- Temporary tracking control BMPs
 - Stabilized construction entrance/exit
 - Stabilized construction roadway
 - Street sweeping and vacuuming
 - Entrance/outlet tire wash
- Temporary wind erosion control BMPs
 - Soil binder
 - Geotextiles, plastic covers, and erosion controls blankets/mats
 - Wood mulch
- Non-stormwater management BMPs
 - Water conservation practices
 - Dewatering operations
 - Paving and grinding operations
 - Illicit discharge/illegal dumping reporting
 - Vehicle and equipment cleaning
- Waste management and materials pollution control BMPs
 - Material delivery and storage
 - Spill prevention and control
 - Solid waste management
 - Hazardous waste management
 - Contaminated soil management

Minimum Best Management Practices for Construction Sites

The Municipal Stormwater Permit directs the District to require minimum BMPs at all construction and grading projects. The minimum BMPs are required to ensure reductions in potential pollutants from the project site to the maximum extent practicable and effectively prohibit non-stormwater discharges from construction sites to the MS4. These BMPs also ensure that all construction and grading activities will be in compliance with applicable District ordinances and other environmental laws and supportive of the WQIP goals.

The required minimum BMPs fall into several major categories, as outlined in the Municipal Stormwater Permit, including project planning, good site management, non-stormwater management, erosion control, sediment control, run-on and runoff controls, and, where applicable,

active/passive sediment treatment. The BMPs chosen to be implemented at a particular project must be site specific, seasonally appropriate, and construction-phase appropriate. Notwithstanding seasonal variation, projects occurring during the dry season will be required to plan for and address rain events that may occur.

The District also chose to include minimum BMPs that support the WQIP priorities and integrate WQIP strategies PO-12 and PO-13. Good-housekeeping BMPs prevent discharges of WQIP high-priority pollutants, including metals, bacteria, and trash, to the MS4. In addition, pursuant to strategy PO-13, the District requires sites to cover construction material stockpiles that contain metals, such as treated timber, during wet weather. The minimum BMPs for construction sites identified in the District's JRMP include, but are not limited to, the following.

- Project planning
 - Minimization of areas that are cleared and graded to only the portion of the site that is necessary for construction
 - Develop and implement a SWPPP or construction BMP plan
 - Contractor Training (formal training or District staff training)
- Non-stormwater management
 - Water conservation practices
 - Dewatering operations
 - Paving and grinding operations
 - Vehicle and equipment cleaning
- Good housekeeping/waste management
 - Cover construction material stockpiles, such as treated lumber, during wet weather
 - Material delivery and storage
 - Solid waste management
 - Spill prevention and control
- Erosion control
 - Preservation of existing vegetation
 - Minimization of exposure time of disturbed soil areas
 - Wood mulching
 - Soil preparation and roughening
- Sediment control
 - Silt fence
 - Sand bag barrier
 - Sediment trap
 - Gravel bag berms
- Run-on and runoff control

- Protect site perimeter to prevent run-on from entering the site and site runoff

JRMP Enforcement Authority – District Code, Article 10

District Code, Article 10—the San Diego Unified Port District Stormwater Management and Discharge Control Ordinance—prohibits the deposit or discharge of any chemicals or waste into the Tidelands or San Diego Bay, and makes it unlawful to discharge pollutants directly into the non-stormwater, or indirectly into the stormwater conveyance system. Article 10 also requires the implementation of BMPs, stormwater plans, and other measures, as appropriate to control the discharge of pollution to Tideland or receiving waters. The District uses its enforcement authority established by Article 10. Article 10 satisfies the provision of the Municipal Stormwater Permit that requires each Co-permittee to establish, maintain, and enforce adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 through statute, ordinance, permit, contract, order, or similar means.

Dewatering General Permit (Order No. R9-2015-0013)

The General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters Within the San Diego Region (Dewatering General Permit) (Order No. R9-2015-0013) is an NPDES permit that regulates temporary discharges of groundwater extraction wastes to San Diego Bay, and its tributaries under tidal influence, from groundwater extraction due to construction and other groundwater extraction activities. Dischargers must meet the applicable criteria listed in the permit to be subject to WDRs under this permit. Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of the permit. The discharge of groundwater extraction waste from any site shall not, separately or jointly with any other discharge, cause violations of certain water quality objectives in San Diego Bay and establishes monitoring and reporting requirements.

The San Diego RWQCB also issues Conditional Waivers of Waste Discharge Requirements for Low Threat Discharges in the San Diego Region (Order No. R9-2019-0005), which covers certain categories of dewatering. The San Diego RWQCB has considered the types of discharges included in the Order and determined each to be in the public interest. Discharges from short-term construction dewatering operations to land require a Notice of Intent. Discharges which comply with the waiver conditions in the Order are not expected to pose a threat to the quality of waters of the State. Monitoring and reporting requirements are included in the Order to verify the adequacy and effectiveness of the waiver's conditions.

San Diego Unified Port District, Ordinance No. 2681 (In-Water Hull Cleaning Regulations)

The District adopted in-water hull cleaning regulations to reduce or eliminate copper pollution caused by in-water hull cleaning activities in San Diego Bay. Ordinance No. 2681 requires the use of BMPs for all in-water hull cleaning on recreational or commercial boats and requires permits for all hull cleaning businesses.

National Pollutant Discharge Elimination System Permits

Three San Diego shipyards (BAE Systems San Diego Ship Repair, Continental Maritime of San Diego, and NASSCO) were assigned individual NPDES permits and six additional facilities have active

Notice of Intents under the Industrial General Permit with the San Diego RWQCB. These permits establish monitoring and reporting requirements and require a SWPPP. The SWPPP includes BMPs required to prevent pollutants associated with industrial activities from entering surface waters and impacting water quality, particularly during storm events.⁹ Pollutants that may be associated with shipyard and maritime activities include heavy metals, oil and grease, pH, total organic carbon, total suspended solids, and other substances that may cause toxicity to marine organisms. The following list identifies the active, site-specific NPDES permits for each of the facilities:

Individual Permit:

- **R9-2015-0034** – BAE Systems San Diego Ship Repair
- **R9-2015-0009** – Continental Maritime of San Diego
- **R9-2016-0116** – National Steel & Shipbuilding Company (NASSCO)

Industrial General Permit:

- **WDID 9 371018035** – San Diego International Airport
- **WDID 9 371001827** – Solar Turbines Harbor Drive Test Facility
- **WDID 9 371026133** – San Diego Hornblower Cruises & Events
- **WDID 9 371026915** – Pacific Maritime Group
- **WDID 9 371026057** – CP Kelco
- **WDID 9 371027145** – San Diego Cold Storage

Each of these permits can be accessed from the San Diego RWQCB's website.¹⁰

Boatyard General Permit

In October 2019, the San Diego RWQCB adopted Order No. R9-2019-0008, making boatyards and boat maintenance and repair facilities adjacent to surface waters subject to WDRs of the CWA and Porter-Cologne Act. This order became effective in February 2020. Eight boatyard dischargers within the District's jurisdiction are subject to the Boatyard General Permit, six of which are within the proposed PMPU area, as summarized in Table 4.8-5. Boatyards and boat maintenance and repair facilities along San Diego Bay conduct industrial activities that have the potential to discharge pollutants into receiving waters when exposed to stormwater.¹¹ These potential pollutants include heavy metals, oil and grease, pH, chemical oxygen demand (COD), total organic carbon, total suspended solids, and other substances that may cause toxicity to marine organisms. A SWPPP is required, including BMPs, to address these potential pollutants as part of the Boatyard General Permit.

⁹ All three San Diego Bay shipyards employ systems that are designed to capture their storm water and divert it to the municipal sewer system.

¹⁰ The individual NPDES permits for the shipyards are available at:
https://www.waterboards.ca.gov/sandiego/water_issues/programs/regulatory/.

¹¹ These boatyards are considered Category 2 facilities according to the general NPDES permit, meaning each facility employs systems designed to capture stormwater that results from typical storms and divert it to the municipal sewer system.

Table 4.8-5. Dischargers Subject to the Boatyard General Permit within PMPU Area

Discharger	Name of Facility	Planning District
Driscoll, Inc.	Driscoll Boat Works/ Driscoll Custom Boats	PD1: Shelter Island
Driscoll, Inc.	Driscoll's West	PD1: Shelter Island
Koehler Kraft Company, Inc.	Koehler Kraft Company	PD1: Shelter Island
Nielsen Beaumont Marine	Nielsen Beaumont Marine	PD1: Shelter Island
Shelter Island Boatyard	Shelter Island Boatyard	PD1: Shelter Island

San Diego Harbor Safety Plan

The San Diego Harbor Safety Plan is designed to provide mariners who use the waters of San Diego Bay with an up-to-date guide to critical navigation issues to enhance vessel safety, with the ultimate goal of pollution prevention and protection of the region's valuable resources. This plan has been developed by the San Diego Harbor Safety Committee, as mandated in the California Oil Spill Prevention and Response Act of 1990 (Government Code Sections 8574.1 et seq.). The goals of the act are to improve the prevention, removal, abatement, response, containment, cleanup, and mitigation of oil spills in the marine waters of California. The act and its implementing regulations (California Code of Regulations Title 14, Sections 800–802) created harbor safety committees for the major harbors of California to “plan for the safe navigation and operation of tankers, barges, and other vessels within each harbor” by preparing “a harbor safety plan, encompassing all vessel traffic within the harbor.”

4.8.4 Project Impact Analysis

4.8.4.1 Methodology

The following impact analysis evaluates the potential effects on existing hydrologic and water quality conditions that could occur from future development consistent with the proposed PMPU. The methodology considers the existing hydrologic and water quality conditions established under Section 4.8.2, *Existing Conditions*, and the existing regulatory setting described under 4.8.3, *Laws, Regulations, Plans, and Policies*, to determine the proposed PMPU's potential to result in one or more impacts on hydrologic and/or water quality conditions.

The impact analysis first identifies any proposed laws, policies, or regulations that would assist with avoiding, eliminating, or reducing any impact associated with hydrology and water quality. The analysis then considers the potential hydrology and water quality impacts from the future development projects that could be constructed and operated consistent with the proposed PMPU's proposed water and land uses. Finally, the analysis considers any policies that may cause or contribute to any related hydrology and/or water quality impact (s).

To avoid redundancy in the analysis and present a concise discussion, the analysis discusses the planning districts collectively, as appropriate. When a planning district has unique or special existing conditions and/or may result in one or more unique significant impacts with mitigation specific to that planning district, the analysis presents a separate discussion of that planning district.

4.8.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining the significance of hydrology and water quality impacts associated with the proposed PMPU. The determination of whether a hydrology and water quality impact would be significant is based on the thresholds described below and the professional judgment of the District based on evidence in the administrative record.

Impacts are considered significant if the proposed PMPU would result in any of the following.

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the project may impede sustainable groundwater management of the basin.
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would:
 - a. Result in substantial erosion or siltation on- or off-site.
 - b. Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.
 - c. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
 - d. Impede or redirect flood flows.
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

As discussed in Section VIII of the Initial Study prepared for the proposed PMPU (Appendix A), it was determined that the proposed PMPU would not result in significant impacts related to placing housing within a 100-year flood hazard area or exposing people or structures to flooding as a result of the failure of a levee or a dam. The conclusion and the supporting rationale are summarized in Chapter 5, *Additional Consequences of PMPU Implementation*. However, since the December 2018 update to the State CEQA Guidelines, these two questions have been removed from Appendix G. Therefore, all questions listed in Appendix G are addressed below.

4.8.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policies would have the potential to avoid or reduce impacts associated with hydrology and water quality and are considered in the impact analysis that follows.

ECO Policy 2.1.1 The District shall prioritize and pursue opportunities for the protection and enhancement of water quality.

ECO Policy 2.1.3 Waste management strategies shall be implemented throughout Tidelands, including as part of development, with a focus on reducing trash entering waterways.

ECO Policy 2.1.4 Aquaculture is encouraged in Tidelands areas using species and sustainable practices that are approved by the California Department of Fish and Wildlife and that do not degrade surrounding natural resources and minimize substantial environmental impacts.

ECO Policy 2.1.5 The District shall continue to conduct, or require permittees to conduct, the long-term monitoring of water, sediment, eelgrass, birds, and marine life in the Bay.

ECO Policy 2.1.6 The District shall implement initiatives to reduce copper loads from recreational vessels to protect marine life in and around the Bay.

ECO Policy 2.1.7 The District shall encourage the use of alternative, non-copper-based antifouling paints.

ECO Policy 2.1.8 In-water hull cleaning of copper-based antifouling paints shall be conducted in a manner that does not cause or contribute to a condition of nuisance or water quality impairment.

ECO Policy 2.1.9 Sewerage pump out facilities shall be accessible and available for use by the public either in fixed locations or through a mobile pump out service.

ECO Policy 2.2.1 The District shall prioritize and pursue opportunities for the protection and enhancement of sediment quality.

ECO Policy 2.2.2 Remediation and restoration efforts shall be implemented in a manner that maximizes ecological benefits, including water quality, ecosystems, and the use of Tidelands consistent with the Port Act.

ECO Policy 2.2.3 Development shall not result in degradation beyond regulatory or legal limits for fill, soil, and sediment quality and shall minimize exposure of adjacent communities to fill, soil, and sediment-based environmental contamination. Also, refer to ECO Policy 2.3.3.

ECO Policy 2.2.4 Through CDPs issued by the District, permittees shall, to the extent feasible and as allowed by regulations, promote beneficial reuse of safe and clean dredged sediments or other potential sediment sources to be used to restore, enhance, and create wetlands and eelgrass habitat, consistent with California Coastal Act Section 30233(b).

ECO Policy 2.3.1 Owners and operators of stormwater conveyances on Tidelands shall comply with the municipal stormwater permit (MS4) and other legal requirements to minimize pollution impacts in the Bay.

ECO Policy 2.3.2 Educational information shall be provided to the public and tenants regarding natural resources protection, runoff or increased runoff flows, and pollution prevention measures to minimize or reduce impacts on water and sediment quality.

ECO Policy 2.3.3 Where development disrupts shoreline fill or Bay sediment, it shall remove contaminated fill or appropriately contain and remediate the fill.

ECO Policy 2.3.4 Permittees shall implement measures to prevent pollution impacts and adverse impacts from runoff flows from all development and maintenance activities.

ECO Policy 2.3.5 Development projects located in areas identified as impaired under Section 303(d) of the Clean Water Act shall implement measures to protect and improve water quality.

4.8.4.4 Project Impacts and Mitigation Measures

Threshold 1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Impact Analysis

Impacts of Water and Land Uses

As described under Section 4.8.3, there are numerous Federal, State, and local laws, regulations, and programs that govern water quality standards or waste discharge requirements that help ensure surface- or groundwater quality is not degraded as a result of development projects. These laws, regulations, and programs would apply to future development that are consistent with the proposed PMPU water and land use designations and the policies contained therein, and where these development projects propose actions that are governed by these laws, regulations, and programs.

Construction

The proposed PMPU serves as a long-term planning blueprint for future development within the proposed PMPU area. Future development currently anticipated in the planned improvements or a planning district's Vision, as well as development consistent with the water or land use designation for the proposed development site, as described in Table 3.1.4, *Description of Water and Land Use Designations*, of the PMPU, may occur. Approval of the plan would not directly result in any specific construction project, including the construction of any buildings or infrastructure. Specifically, buildout of the proposed PMPU would allow for the construction of uses such as commercial, recreational, and maritime industrial. In-water uses could include additional vessel activity associated with more slips and docks with waterside uses that include anchorage, commercial fishing berthing, industrial and deep-water berthing, marine services berthing, navigation corridors, recreational berthing, and sportfishing berthing facilities. Although implementation of the proposed PMPU may allow for an increase in construction activity in the proposed PMPU area, the buildout of the proposed PMPU would take place over a 30-year timeframe, and construction activities would occur periodically throughout that timeframe.

Waterside Construction

Construction of the in-water components of future development allowed by the proposed PMPU may include uses such as anchorage, berthing infrastructure, and aquaculture, which could result in short-term water quality impacts associated with the removal of existing pilings (including piles treated with wood preservatives such as creosote) and piers, construction of new pilings/piers, moorings, floating docks, and aquaculture infrastructure such as buoys and growout lines. Placement of in-water structures could temporarily affect water quality in the absence of regulations. Pile placement and other related construction activities would result in the short-term disturbance of localized sediments. As is typical for projects that involve in-water construction, disruption of sediments could adversely affect water quality by temporarily resuspending sediments and increasing turbidity. In addition, chemicals or contaminants that are present in the sediments could be released into the water column during resuspension, which could temporarily degrade water quality. Further, suspended sediments in the water column can lower levels of dissolved

oxygen, increase salinity, increase concentrations of suspended solids, and possibly release chemicals present in sediments into the water and redeposit them at various locations on the bay floor, making them potentially bioavailable for marine organisms now that they would no longer be buried.

The degree of turbidity resulting from the suspended sediments would vary substantially with the quantity and duration of the construction activity and would also depend on the methods used, the quality of equipment, and the care of the operator. However, in-water BMPs would generally limit the spread of the turbidity plume outside the specific work area. As a result, in most cases increased turbidity levels would be relatively short-lived and generally confined to within a few hundred yards of the activity or within the area of containment outside the specific work area. After the activity causing the initial high turbidity levels within the specific work area ends, sediments would disperse, and background levels would be restored within hours of the disturbance for non-contaminated sites. In addition, tidal currents would slowly dissipate the oxygen-poor water and replenish ambient oxygen levels within one to several tidal exchanges. Therefore, except for areas with known contamination, only temporary water quality impacts related to suspended solids and depressed oxygen levels in the water column of the specific work area would be expected.

Any proposed construction-related dredging or in-water fill would be required to comply with Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. This would include installation of pilings, docks, and other structures; sediment removal; and sediment/soil disposal, among other dredging/fill actions. In addition, construction-related dredging and/or fill would be required to obtain a corresponding Section 401 Water Quality Certification from the RWQCB. The RWQCB-issued Water Quality Certification would specify methods for ensuring the protection of water quality during construction activities, including water quality monitoring requirements in order to meet the Basin Plan water quality objectives and ensure beneficial uses are not impacted. The 401 Water Quality Certification would list specific conditions for the use of in-water construction BMPs to minimize the discharge of construction materials from construction activities, control floating debris, and provide spill containment and cleanup equipment to control potential accidental spills in order to meet the Basin Plan water quality objectives and beneficial uses. Mandatory compliance with these regulations would, in most cases, ensure that impacts from in-water construction activities occurring in areas without sediment contamination would be less than significant.

However, there are known contaminated sediments within several planning districts within the PMPU area. It is possible that in-water construction activities that disturb the Bay floor or that would directly penetrate the Bay floor would have the potential to disturb these sediments. If bottom-disturbing activities occur in areas with known or suspected contaminated sediments, it is possible that resuspended sediments may disperse within as well as outside of the project site boundaries. Dispersion of contaminated sediments may be short- or long-term depending on the duration of construction activities. Bottom-disturbing activities may uncover contaminated sediments that were previously buried deeper in the sediment column below uncontaminated sediments. In addition, dispersion of project-related contaminated sediments could potentially re-contaminate areas that have been previously remediated and/or capped. Resuspended contaminants could also dissolve in the water column, thereby affecting water quality, as well as become available for uptake by biota within and outside of the project area. This would be a significant impact on Bay water and sediment quality as well as aquatic organisms (**Impact-WQ-1**). **Impact-WQ-1** would also potentially occur if contaminated sediments are disturbed or dredged, which would potentially degrade water quality by introducing sediments and contaminants into the

water column that could increase turbidity and degrade water quality conditions. Lastly, **Impact-WQ-1** would potentially occur from the removal of creosote piles, which could result in resuspension of sediments contaminated with PAHs. Creosote is a wood preservative and water-proofing agent for marine pilings used to preserve wooden structures from attack by fungi, marine borers, and insects. Chemical formulations of creosote have varied over the production years, but it is generally reported that PAHs and alkylated PAHs account for up to 90 percent of creosote mixtures. Health effects of exposure to creosote include severe rash or skin irritation, mouth, throat and stomach pain, kidney or liver damage, convulsions, mental confusion, and cancer (CDC 2014). The degree of leaching is affected by salinity (greater in fresh water than in salt water), temperature (increases with increasing temperatures), flow, density of the wood, length of time since treatment of the wood (decreases with increasing age), and the surface area-to-volume ratio.

Mitigation measures are proposed to reduce the significance of **Impact-WQ-1**. Mitigation measure **MM-WQ-1** would require monitoring for turbidity and known constituents of concern during construction activities to verify the activities do not affect beneficial uses in San Diego Bay; **MM-WQ-2** is designed to minimize re-suspension, spillage, and misplaced sediment during construction activities; and **MM-WQ-3** would contain the resuspension of suspended sediments and prevent the dispersal of known constituents of concern outside the construction work area. Mitigation measure **MM-WQ-4** would require a Dredging Management Program that must include (A) a Dredging Operations Plan identifying the appropriate standard operating procedures and sediment control BMPs to be implemented, (B) a Contingency Plan to prepare for equipment or operational failures, (C) a Health and Safety Plan for Dredging Activities, and (D) a Communication Plan. Mitigation measure **MM-WQ-5** requires future project proponents to implement a (Waterside) Sediment Management Program that must contain (A) a Sampling Analysis Plan per the USACE and EPA sampling protocol, (B) a Contaminated Sediment Management Plan, (C) In-Water Activity Specific Procedures, and (D) Post-Construction Sampling and Analysis verification sampling. Mitigation measure **MM-WQ-6** requires future project proponents to propose and conduct remediation of the site if, after in-water construction activities and dredging are complete, site sampling shows exceedances of constituents of concern; and **MM-WQ-7** requires that removed creosote-treated piles be disposed of in a manner that precludes their further use.

In sum, future projects would be required to comply with existing regulatory requirements and successfully complete the CWA Section 404 Federal processes—both of which include obtaining a water quality certification under CWA Section 401 and implementing common in-water construction BMPs. This would, in most cases, reduce any potential water quality impacts of in-water construction to less than significant.

In certain cases, however, future projects would potentially disturb contaminated sediments, which could be released back into the water column and spread contaminants beyond their existing locations (**Impact-WQ-1**). While implementation of **MM-WQ-1** through **MM-WQ-7** would minimize potential water quality impacts associated with sediment contamination (**Impact-WQ-1**), it cannot be determined with certainty that impacts would be reduced to less than significant because the timing, duration, location, and design specifications of future in-water development are not known at this time. As such, it is still possible that in-water construction activities could disturb contaminated sediment and thereby release it into the water column. Additionally, the RWQCB and other Federal and State agencies have concurrent jurisdiction with the District over approval of the methods for in-water construction. As such, while the District has required measures to minimize impacts associated with contaminated sediment, the RWQCB and/or other Federal and State agencies also have regulatory authority to approve specific methods for in-water construction.

Therefore, **Impact-WQ-1** would be significant and unavoidable despite the implementation of mitigation measures and mandatory compliance with regulations.

Landside Construction

Groundwater Quality

Groundwater is present within each of the planning districts in the PMPU area, ranging from approximately 2 to 44 feet below the ground surface, with groundwater in several of the planning districts present at depths of less than 10 feet and roughly corresponding to the water level in the Bay. Construction of projects proposed under the PMPU may result in short-term dewatering during construction of the foundations for developments such as hotels, restaurants, mobility hubs, and related project elements.

Future development projects proposed under the PMPU would be required to comply with dewatering requirements imposed by the San Diego RWQCB general WDRs for discharges from temporary groundwater extraction and similar waste discharges to San Diego Bay (Order No. R9-2015-0013 and R9-2019-0005). To obtain coverage under this order, a discharger must submit a complete Notice of Intent application package to the San Diego RWQCB office at least 60 days before proposed commencement of the discharge. The two orders require that discharges do not cause or contribute to a violation of any applicable water quality objectives and establish monitoring and reporting requirements. The discharger would be required to maintain compliance with the effluent limitations applicable to the receiving water, as specified in Order No. R9-2015-0013 (refer to Table 8 of the order). For example, the permit has effluent limitations for settleable solids, total suspended solids, turbidity, chronic toxicity, pH, and a number of additional parameters.

In addition, Order No. R9-2015-0013 identifies the monitoring and reporting program requirements. The purpose of the monitoring and reporting program is to determine and ensure compliance with effluent limitations and other requirements established in the order, assess treatment efficiency, characterize effluents, and characterize the receiving water and the effects of the discharge on the receiving water. The San Diego RWQCB may specify increased monitoring requirements to ensure that applicable water quality objectives are maintained in the receiving water.

Any dewatering or construction-related non-stormwater discharges would be controlled in compliance with the San Diego RWQCB permit for dewatering. The permit requires permittees to conduct monitoring of dewatering discharges and adhere to effluent and receiving water limitations contained within the permit so that water quality of surface waters is protected. Compliance with the applicable dewatering permit would further ensure that the impacts of these discharges would be less than significant.

Surface Water Quality

Landside construction activities associated with future development allowed under the proposed PMPU in PD2, PD3, PD8, and PD9 could result in activities such as demolition, grading and excavation, filling and compaction, and construction of aboveground facilities and buildings. In case of heavy rain or wind conditions, during excavation or other ground-disturbing activities, erosion and sediment transport from the proposed PMPU project sites and on- and offsite staging areas could increase in the absence of regulations. Stormwater runoff (or wind) could carry the exposed or eroded sediments to the storm drain system or directly into the Bay. Erosion and sedimentation

affects water quality through interference with photosynthesis, oxygen exchange, and the respiration, growth, and reproduction of aquatic species. Additionally, other pollutants, such as nutrients, metals, and hydrocarbons, can attach to sediment and be transported to the Bay.

In general, the addition to potential pollutant contributions from disturbed soil areas; the delivery, handling, and storage of construction materials and wastes; as well as the use of construction equipment could introduce a risk for stormwater contamination that could affect water quality. Spills or leaks from heavy equipment and machinery would potentially result in oil and grease contamination. On- and offsite staging areas or building sites can also be the source of pollution because of the use of paints, solvents, cleaning agents, and metals during construction. Materials from soil excavation could contain hazardous materials that may be exposed to stormwater. Larger pollutants, such as trash, debris, and organic matter, are also associated with construction activities. Furthermore, concrete used for structures, footings, and other paving materials could be potential sources of water quality pollution if any of these materials were spilled or deposited on unprotected surfaces. Other potential effects include health hazards such as skin conditions (e.g., dermatitis and burns) and eye irritation, and aquatic ecosystem damage associated with introduction of bacteria, viruses, and vectors, as well as toxic contamination and alteration in pH if waste management is not adequately implemented.

However, existing regulations are already required that minimize the potential for stormwater runoff and erosion from water and wind, as well as spills and adverse effects from machinery leaks. Construction activities proposed consistent with the PMPU that would disturb more than 1 acre of land would have to comply with the Construction General Permit, which would require development and implementation of a SWPPP by a Qualified SWPPP Developer. The SWPPP would identify what construction BMPs would be implemented in order to protect stormwater runoff and include a monitoring plan for measuring BMP effectiveness. BMPs are required to be inspected regularly by a Qualified SWPPP Practitioner to ensure BMPs are performing as anticipated. For projects that are not subject to the Construction General Permit (i.e., under 1 acre of land disturbance), PMPU construction activities would still need to comply with the District's JRMP, which requires preparation of a Construction BMP Plan.

In either case—SWPPP or Construction BMP Plan—a variety of construction BMPs would be required to be implemented throughout the various construction phases in order to protect water quality. At a minimum, BMPs would include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The construction SWPPP or Construction BMP Plan would specify properly designed, centralized storage areas that keep these materials away from rain and associated runoff. When grading is conducted during the rainy season, the primary BMPs selected would focus on erosion control (i.e., keeping sediment in place) and then on sediment control (i.e., keeping sediment on site). Measures would include a range of stormwater control BMPs: for example, installing erosion control such as silt fences, staked fiber rolls, and geofabric to prevent silt runoff to storm drains or waterways. Topsoil and backfill would be stockpiled, protected, and replaced at the conclusion of construction activities. Disturbed soil would be revegetated as soon as possible with the appropriate selection and schedule for turf, plants, and other landscaping vegetation.

Therefore, because construction activities would be required to comply with existing laws, regulations, and District programs (e.g., Construction General Permit, District's JRMP, Dewatering General Permit) and specific water quality BMPs must be implemented during construction activities as listed in the JRMP and subject to District approval, impacts associated with landside

construction-related water quality violations and waste discharge requirements would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, *Project Description*, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, may in certain cases result in a significant impact related to substantial degradation of water quality during in-water construction (**Impact-WQ-1**). This significant impact may still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with the new Waterfront Destination Park under Option 1 could include landside demolition, grading and excavation, and filling and compaction. While these activities have the potential to result in stormwater runoff and erosion, as well as the use of potential pollutants, construction of a Waterfront Destination Park under Option 1 would be conducted in compliance with the regulations described above, including the Construction General Permit, District's JRMP, and/or the Dewatering General Permit (if applicable), that would minimize the potential for erosion, sedimentation, runoff, or spills of pollutants during construction. Option 1 does not specifically include any in-water elements that could result in water quality impacts during in-water construction activities. Therefore, with compliance with regulations, construction under Option 1 would not result in any additional or more severe impacts related to the degradation of water quality than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, the implementation of the proposed PMPU, including within PD3, may in certain cases result in a significant impact related to substantial degradation of water quality during in-water construction (**Impact-WQ-1**). This significant impact may still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with the expanded Lane Field Setback Park could include landside demolition, grading and excavation, and filling and compaction. While these activities have the potential to result in stormwater runoff and erosion, as well as the use of potential pollutants, construction activities associated with Option 2 would be conducted in compliance with the regulations described above, including the Construction General Permit, District's JRMP, and/or the Dewatering General Permit (if applicable), that would minimize the potential for erosion, sedimentation, runoff, or spills of pollutants during construction. Option 2 does not specifically include any in-water elements that could result in water quality impacts during in-water construction activities. Therefore, with compliance with regulations, construction under

Option 2 would not result in any additional or more severe impacts related to the degradation of water quality than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, the implementation of the proposed PMPU, including within PD3, may in certain cases result in a significant impact related to substantial degradation of water quality during in-water construction (**Impact-WQ-1**). This significant impact may still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with the new park space that could be developed under Option 3 could include landside demolition, grading and excavation, and filling and compaction. While these activities have the potential to result in stormwater runoff and erosion, as well as the use of potential pollutants that could impact water quality, construction activities associated with Option 3 would be conducted in compliance with the regulations described above, including the Construction General Permit, District's JRMP, and/or the Dewatering General Permit (if applicable), that would minimize the potential for erosion, sedimentation, runoff, or spills of pollutants during construction. Option 3 does not specifically include any in-water elements that could result in water quality impacts during in-water construction activities. Therefore, with compliance with regulations, construction under Option 3 would not result in any additional or more severe impacts related to the degradation of water quality than buildout of the proposed PMPU without Option 3.

Operation

Future development currently anticipated in the planned improvements or the planning districts' Vision, as well as development consistent with the water or land use designation for the proposed development site, as described in Table 3.1.4, *Description of Water and Land Use Designations*, of the PMPU, may occur. For redevelopment projects, existing development would be replaced with more hydrologically beneficial features including providing onsite water retention or biofiltration, which are required by the District's JRMP for all projects. These design features would reduce stormwater runoff and improve water quality. Additionally, future development may result in operational activities both in water and on land that would have the potential to generate water quality pollutants. These operational activities are described below.

Waterside Operations

Impacts from Increased Commercial and Recreational Vessel Activity

Increased waterside commercial and recreational vessel activity associated with future development or redevelopment may include uses such as recreational boat berthing, commercial fishing, and sportfishing. Specifically, buildout of the proposed PMPU may result in 65 additional commercial fishing slips and 35 additional recreational boat slips in PD1, 225 recreational boat slips in PD2, 150 recreational boat slips in PD3, 20 recreational boat slips in PD9, and 55 recreational boat slips in PD10.

An increase in the number of vessel slips would increase the chances of vessels discharging their gray water (galley and shower water) and black water (sewage) illegally directly into marine waters instead of into pump-out stations. In addition, pollutants generated from boat hull maintenance, in-

water cleaning (including chemicals used in top-side and underwater cleaning), and leaking fuel and oil would negatively affect water quality. Furthermore, copper has been a standard ingredient in antifoulant hull paints for many decades and leaches into the water, which has led to water quality impairments in several planning districts. As discussed in Section 4.8.2.3, *Surface and Waterbody Water Quality*, 303(d)-listed impairments for dissolved copper are present within PD1 (Shelter Island Yacht Basin and America's Cup Harbor), PD2 (West Harbor Island and East Harbor Island), PD3 (Marriott Marina), PD9 (Coronado Cays), and PD10 (Glorietta Bay), all of which are attributed to copper paint leaching from vessel hulls. There is currently only one TMDL in place to address copper impairments, which is at the Shelter Island Yacht Basin. It is reasonably foreseeable that additional vessels using antifoulant copper-based paint for vessel hulls would potentially contribute to the existing copper impairments and may worsen the existing condition. Collectively, these impacts are considered significant (**Impact-WQ-2**). Copper loading to these water bodies results from both the passive leaching of antifoulant copper-based paints as well as in-water hull cleaning of these types of paints.

Water quality impacts from passive leaching of antifoulant copper-based paints can be reduced by converting to lower leach rate or non-copper alternative paints. In addition, water quality impacts from vessel maintenance and cleaning (including both top-side and in-water hull maintenance and cleaning) can be avoided or lessened by using non-toxic cleaning products and non-copper antifoulant paints, minimizing or eliminating toxic cleaning agents, and implementing practices that prevent or reduce opportunities for toxic products to contact surface water.

Mitigation measure **MM-WQ-8** is proposed to reduce copper impacts on water quality associated with the potential expansion of any marinas that could occur under the proposed PMPU. This mitigation measure requires development and implementation of a Marina Best Management Practice Plan and copper reduction measures, which would identify the specific use restrictions in accordance with recommendations described in current or future District and state-wide clean boating practices guidance or regulations (e.g., *San Diego Bay Boaters Guide* [District 2006] and the California State Parks Division of Boating and Waterways' and California Coastal Commission's Boating Clean and Green Program [California DBW 2017]). The Marina Best Management Practice Plan would also provide copper education and outreach to the marina occupants. Implementation of **MM-WQ-8** would also require future project proponents to implement measures that would reduce pollutant load runoff, reduce inputs of copper from passive leaching and in-water hull cleaning activities, and require ongoing monitoring of water quality to ensure that marina operations do not equal or exceed the Basin Plan water quality objectives. Should water quality objectives be worsened by the additional vessels (i.e., net new), additional BMPs would be required. With implementation of **MM-WQ-8**, impacts from copper loading would be lessened; however, the net increase in the number of vessels with copper-based paints used on their hulls would result in a significant and unavoidable impact (**Impact-WQ-2**).

Aquaculture, particularly shellfish and seaweed aquaculture, offers multiple co-benefits, such as fisheries enhancement, ecosystem restoration, bioremediation, carbon sequestration, mitigation banking, and habitat enhancement and otherwise improving water quality and ecosystem productivity. Aquaculture within the proposed PMPU allows for the cultivation of shellfish and seaweed. Depending on the type of aquaculture operations proposed, the primary potential causes of water quality degradation include turbidity caused during harvesting and other similar operations, as well as biological oxygen demand, and therefore significant water quality impacts may occur during operation prior to mitigation (**Impact-WQ-3**). Aquacultural operations would be subject to water-quality regulations including Section 401 of the CWA and Article 10 of the District

Code that regulate water quality, as well as the Magnuson-Stevens Fishery Conservation and Management Act, Endangered Species Act, and Marine Mammal Protection Act (NOAA 2021). In addition to compliance with applicable laws and regulations, **MM-WQ-9** would minimize impacts by requiring future aquaculture projects that may have significant impacts to (1) conduct a siting study to predict potential water quality impacts due to physical factors such as reduced flushing as well as any potential operational impacts, (2) develop an aquaculture water quality monitoring plan consistent with the requirements of the Shellfish Aquaculture Mitigation Plan, and (3) identify site-specific BMPs to be implemented during operation of the aquaculture facility to lessen or eliminate potential water quality impacts. With implementation of **MM-WQ-9**, impacts would be less than significant.

Impacts from Waterside Industrial Uses

The PMPU does not propose any changes to the waterside industrial land uses. As discussed within this threshold under *Landside Operations* below, SIC industrial uses are subject to regulation by the San Diego RWQCB through the Industrial General Permit, individual NPDES permits, or WDRs, and must include BMPs to prevent pollutants from entering stormwater discharges and runoff into the Bay. Development within the Industrial and Deep Water Berthing and Marine Services water designations would be subject to regulation by the San Diego RWQCB and would need to comply with existing regulations and all associated BMPs pertaining to marine-related industrial activities and services, including, but not limited to, the District's JRMP and Stormwater Ordinance, and the Industrial General Permit and WDRs. Therefore, water quality impacts from potential industrial operations would be less than significant by complying with all applicable existing water quality regulations and required BMPs specified in the Industrial General Permit and the District JRMP, as well as the water quality monitoring and reporting requirements and discharge limitations identified in the NPDES permit that may be issued to a future development by the San Diego RWQCB. Future development would be required to implement stringent BMPs (such as the design and implementation of a full-capture stormwater diversion system) in agreement with those currently in place at the other San Diego Bay shipyards.

Landside Operations

Typical pollutants associated with operations of future development may include, but are not limited to, pathogens, nutrients, pesticides, organic compounds, metals, trash/debris, and oil and grease. Consequently, operations from future development could increase the amount of pollutants generated on site that could impair water quality if not treated prior to discharge.

Operations from future development allowed under the proposed PMPU would be required to comply with the District's Stormwater Management and Discharge Control Ordinance (i.e., Article 10) and the JRMP, which include specific requirements for all development and redevelopment activities and the ongoing operation of municipal (e.g., parks, parking), commercial, and industrial facilities. Minimum BMPs consistent with the District *BMP Design Manual* require the use of site design BMPs and source control BMPs for all projects. The District's Article 10 also specifically requires pollutant control BMPs for all PDPs, which includes projects falling under the proposed PMPU. Projects considered a PDP would be required to implement pollutant control BMPs, following the hierarchy described in the District's *BMP Design Manual* (retention, partial retention with biofiltration, biofiltration, or flow-through with participation in an Alternative Compliance Program). Stormwater pollutant control BMPs are engineered facilities that are designed to retain (i.e., intercept, store, infiltrate, evaporate, and evapotranspire), biofilter, and/or provide flow-

through treatment of stormwater runoff generated on the project site. Additionally, a post-construction SWQMP must be prepared for all projects to identify the project-specific site design and source control BMPs (all projects) and pollutant control BMPs (for PDPs). The development planning requirements ensure that future development will incorporate structural design features to protect stormwater quality. In addition, once built and operational, future municipal, commercial, and industrial facilities are subject to a suite of operational BMPs required within the JRMP that serve as pollution prevention measures. Implementation of site-specific BMPs, in accordance with the applicable JRMPs, would filter potential pollutants from runoff prior to discharge into receiving waters.

The Marine Terminal, Maritime Services and Industrial, and Marine Sales and Services land use designations have the potential to generate pollutants that could discharge into the Bay and impair water quality because an increase in activities may increase the potential for contaminated runoff. Industrial uses identified with SICs would need to comply with individual NPDES Permits, and the Industrial General Permit as applicable, in addition to the requirements of Article 10 and the JRMP discussed above. Individual NPDES holders must demonstrate conformance with their permit requirements at all times. Under the Industrial General Permit, dischargers must demonstrate conformance with applicable industrial BMPs and prepare an industrial SWPPP that contains a site map that shows the site perimeter, areas where industrial activities occur, stormwater collection and discharge points, and drainage patterns across the site. BMPs must be implemented and maintained at industrial facilities to prevent pollutants from entering stormwater discharges or reduce their levels. Facilities without a SIC code would not be subject to the Industrial General Permit, but would generally be subject to WDRs and would similarly implement applicable industrial BMPs to reduce the discharge of pollutants to Bay waters. However, in general, all industrial uses within the proposed PMPU area would have a SIC code. Compliance with applicable permit requirements would ensure impacts on water quality are less than significant.

Therefore, by complying with the District's JRMP and Stormwater Management and Discharge Control Ordinance, as well as the SWRCB's General Industrial Permit, future landside development allowed under the proposed PMPU would not violate any water quality standards or waste discharge requirements. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impacts related to water quality due to the future operation of marinas (**Impact-WQ-2**) and aquaculture facilities (**Impact-WQ-3**). These significant impacts would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operation of the new Waterfront Destination Park under Option 1 would be similar to that of other recreational uses within the proposed PMPU area, which generally are not anticipated to generate pollutants that could impair water quality. In addition, operation of a new Waterfront Destination Park under Option 1 would comply with Article 10 and the District's JRMP, which would minimize impacts from stormwater discharge by requiring the implementation of permanent BMPs. Operation of Option 1 would not include operation of marinas or aquaculture facilities that would result in water quality impacts. Therefore, operations under Option 1 would not result in any additional or more severe impacts related to degradation of water quality or violation of water quality standards or waste discharge requirements than the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impacts related to water quality due to the future operation of marinas (**Impact-WQ-2**) and aquaculture facilities (**Impact-WQ-3**). These significant impacts would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operation of the expanded Lane Field Setback Park under Option 2 would be similar to that of other recreational uses within the proposed PMPU area, which generally are not anticipated to generate pollutants that could impair water quality. In addition, operation of new park space under Option 2 would comply with Article 10 and the District's JRMP, which would minimize impacts from stormwater discharge by requiring the implementation of permanent BMPs. Operation of Option 2 would not include operation of marinas or aquaculture facilities that would result in water quality impacts. Therefore, operations under Option 2 would not result in any additional or more severe impacts related to degradation of water quality or violation of water quality standards or waste discharge requirements than the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impacts related to water quality due to the future operation of marinas (**Impact-WQ-2**) and aquaculture facilities (**Impact-WQ-3**). These significant impacts would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operation of new park space that could be developed under Option 3 would be similar to that of other recreational uses within the proposed PMPU area, which generally are not anticipated to generate pollutants that could impair water quality. In addition, operation of new park space under Option 3 would comply with Article 10 and the District's JRMP, which would minimize impacts from stormwater discharge by requiring the implementation of permanent BMPs. Operation of Option 3 would not include operation of marinas or aquaculture facilities that would result in water quality impacts. Therefore, operations under Option 3 would not result in any additional or more severe impacts related to degradation of water quality or violation of water quality standards or waste discharge requirements than the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts on water quality related to violating water quality standards or waste discharge requirements or otherwise substantially degrading surface or ground water quality. Rather, the proposed PMPU policies listed in Section 4.8.4.3 would reduce potential impacts on water quality associated with violations of water quality standards by prioritizing the protection and enhancement of water quality (ECO Policy 2.1.1), committing to implementing initiatives to reduce copper loads from recreational vessels (ECO Policy 2.1.6), encouraging the use of alternative non-copper based antifouling paints (ECO Policy 2.1.7), committing to prioritizing and pursuing opportunities for the protection and enhancement of sediment quality (ECO Policy 2.2.1), reinforcing compliance with the MS4 permits and other legal requirements to minimize pollution impacts (ECO Policy 2.3.1), implementing measures to prevent pollution impacts and adverse impacts from runoff flows from all development and maintenance activities (ECO Policy 2.3.4), and implementing measures to protect and improve water quality from development projects located in areas identified as impaired under Section 303(d) of the CWA (ECO Policy 2.3.5).

Impact Determination and Mitigation

Implementation of the proposed PMPU would violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Significant Impacts

Impact-WQ-1: Disturbance of Contaminated Sediment During Construction. Contaminated sediments are present in PD1, PD2, PD3, and PD4. In-water construction activities within these areas have the potential to disturb contaminated sediments, which could be released back into the water column and resuspended, resulting in the spread of the contaminants. Dredging of contaminated sediment could also degrade water quality by resuspending contaminated sediments and releasing constituents of concern. In addition, constituents of concern could be released when sediments are suspended in the water column. Resuspended contaminants may dissolve into the water column and become available for uptake by biota. Redeposition may occur near the dredge or construction areas, or, depending on the environmental conditions and controls, resuspended sediment may be transported to other nearby locations in the water body. Resuspension of contaminated sediments and release of constituents of concern could impact water quality by increasing contaminant levels to levels toxic to aquatic receptors. Lastly, the removal of creosote piles could result in resuspension of sediments contaminated with PAHs.

Impact-WQ-2: Contribution to Water Quality Impairments from Future Marina Operations. Operation of future development and redevelopment of marinas may impair water quality by increasing the chances of accidental discharge of gray water or black water directly into marine waters. In addition, pollutants potentially generated from boat maintenance without appropriate BMPs, in-water hull cleaning of copper-based anti-fouling paint, and accidental discharges of fuel and oil could negatively affect water quality. In addition, copper associated with anti-fouling hull paints has contributed to water quality impairments in San Diego Bay. The potential net increase in the number of vessel slips would potentially result in additional contributions to water quality impairments within the Bay.

Impact-WQ-3: Water Quality Degradation from Aquaculture Operations. Depending on the type of aquaculture being practiced and the methods used, water quality degradation, which could

include turbidity caused during harvesting and other similar operations, as well as biological oxygen demand, may occur during operation of aquaculture facilities.

Mitigation Measures

For **Impact-WQ-1**:

MM-WQ-1: Monitor Turbidity and Constituents of Concern During Construction-Related Sediment Disturbance. Prior to the approval of a future development project that would occur in an area with known or suspected contaminated sediments and would involve in-water construction activities that could disturb sediment (e.g., dredging, pile removal or installation, or other in-water construction-related activities that will disturb Bay floor sediment), the project proponent shall retain a water quality monitor, approved by the District, who shall prepare a water quality monitoring plan and shall conduct water quality monitoring to demonstrate to the satisfaction of the District and the RWQCB that construction activities do not violate the Basin Plan or project-specific water quality objectives. Approval of the plan by the District and appropriate regulatory agencies is required before field activities can be initiated. The plan shall incorporate: (1) all permit-specific regulatory monitoring and reporting requirements and (2) a detailed description of the proposed water quality monitoring program. The plan will clearly identify the project boundaries, and chemical constituents of concern and water quality thresholds; and provide a detailed description of the water quality monitoring to be conducted prior to, during, and after construction activities to ensure compliance with this mitigation measure. The monitoring plan will be robust enough to ensure that any exceedances of water quality objectives are identified. Depending upon the scope of the project and the potential for the release of project-derived contaminants, the water quality monitoring shall include visual inspections of turbidity and debris as well as water-column monitoring using appropriate and calibrated water quality monitoring field equipment to measure, at a minimum: turbidity, dissolved oxygen, pH, temperature, and salinity. The District, in consultation with the RWQCB and other resource agencies (as applicable), shall determine the types of constituents to be monitored, and appropriate water quality thresholds and standards for the project (e.g., San Diego Basin Plan, California Toxics Rule, applicable TMDLs, and/or other site-specific considerations). If water column monitoring indicates exceedances of water quality thresholds (e.g., turbidity or dissolved oxygen), then water column samples shall be collected and analyzed for project-specific chemicals of concern. The project proponent shall use a State of California Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for all analytical testing.

The designated water quality monitor shall stop work to ensure that turbidity does not extend outside of the immediate construction area. If turbidity is 20 percent higher outside the work area versus inside the work area, the water quality monitor may direct the temporary halt of construction activities. The District shall direct the project proponent to implement additional control measures necessary to protect water quality per CWA Section 401 and 404 permits, the San Diego Basin Plan, and the project-specific permits. Depending upon the requirements in the permit, the project proponent and/or District may be required to alert the regulatory agencies if a water quality violation is observed. In addition, the project proponent shall coordinate water quality monitoring efforts and shall provide copies of all monthly water quality monitoring data to the RWQCB and District throughout the duration of project construction, as outlined in the reporting schedule of the agency-approved monitoring plan or project-specific permits.

MM-WQ-2: Implement Best Management Practices During Construction-Related Sediment Disturbance. Prior to the approval of a future development project that involves dredging, pile removal (especially the removal of creosote-treated piles), pile installation, and other construction-related activities that may disturb Bay floor sediment within areas of known or suspected sediment contamination, the District shall identify BMPs necessary for minimizing resuspension, spillage, and misplaced sediment during construction activities, as the deposition of such material would increase turbidity and degrade water quality. BMPs shall be implemented by the project proponent and shall include, but shall not be limited to, the following:

- The project proponent shall not stockpile material on the bottom of the San Diego Bay floor and shall not sweep or level the bottom surface with the bucket.
- The project proponent shall use and maintain silt curtains for dredging operations that encircle the area of construction activities and shall minimize the times in which these curtains are temporarily opened (allowing only necessary openings for operation of the curtain), to contain suspended sediments, as more specifically described in **MM-WQ-3**.
- Based on a determination of the District and applicable Federal and/or State permitting agency (as applicable), air curtains in conjunction with silt curtains may be used to contain resuspended sediment, and allow barges containing dredge material or empty barges to transit into and out of the work area without the need to open and close silt curtain gates.
- *In-Water Activity-Specific Procedures (Pile Installation or Removal)*. The project proponent shall conduct pile installation or removal in a manner that implements applicable permit requirements, including the CWA Section 404 permit and CWA Section 401 Water Quality Certification. The following additional measures shall be required based on the type of pile installation, or removal, that occurs.

- Impact Hammer Pile Driving or Jetting

Turbidity curtains shall be installed for District projects or non-District projects by the proponent consistent with the District's Best Management Practices and Environmental Standards for Overwater Structural Repair and Maintenance Activities for Existing Port Facilities Conducted by the San Diego Unified Port District (District 2019).

- Spudding

Spuds lifted during in-water construction shall be lifted slowly—at least a quarter of the speed that spuds are lifted during normal operation. Before the spud reaches the subsurface of the Bay floor during removal, the operator shall conduct spud extraction in 2-minute intervals (repeated 2-minute extraction followed by 2-minute pause) to reduce the disturbance of Bay sediment.

MM-WQ-3: Apply Silt Curtains During Construction-Related Sediment Disturbance with Contaminants of Concern. Each future development project that involves dredging, pile installation, and other construction-related activities that will disturb Bay floor sediment within areas of known or suspected sediment contamination, shall utilize silt curtains for containment of the contaminants of concern. Prior to the District's approval of each future project, the project proponent shall provide details about the silt curtain installation, curtain configurations, technologies, and actual locations to the District for its review and approval. During dredging activities where contaminated sediment conditions are present (based on the results of **MM-**

WQ-1 or based on other recent available evidence), the project proponent shall deploy inner- and outer-boundary floating silt curtains that enclose the construction area. The floating silt curtain shall consist of connected lengths of fabric. A continuous length of floating silt curtain shall be arranged to fully surround the construction equipment. The silt curtain shall be supported by a floating boom in open water areas (such as along the bayward side of the dredging areas). Along pier edges, the project proponent shall have the option of connecting the silt curtain directly to the structure. The project proponent shall continuously monitor the silt curtain for damage, dislocation, or gaps and immediately fix any locations where it is no longer continuous or where it has loosened from its supports. The bottom of the silt curtain shall be weighted with ballast weights or rods affixed to the base of the fabric that do not touch the Bay floor at the lowest tide even with curtain float/swing. Where the District determines it is feasible and applicable, the floating silt curtains shall be anchored and deployed from the surface of the water to just above the substrate allowing for tidal action. If deemed necessary by the District once project construction details and plans are available, silt curtains with tidal flaps shall be installed to facilitate curtain deployment in areas of higher flow. Based on a determination by the District and the Federal and/or State permitting agencies (as applicable), air curtains may be used in conjunction with silt curtains to contain resuspended sediment and allow barges containing dredge material or empty barges to transit into and out of the work area, without the need to open and close silt curtains.

MM-WQ-4: Implement a Dredging Management Program. Prior to the District's approval of a future development that involves dredging in known or suspected areas with sediment contamination, excluding maintenance dredging with low level constituents of concern (COCs) that would allow for beneficial reuse or other unconfined aquatic disposal options as approved by the EPA and USACE, the project proponent shall prepare and submit to the District for review and approval a Dredging Management Program (DMP) that complies with applicable permit requirements, including the CWA Section 404 permit and CWA Section 401 Water Quality Certification. The DMP shall be implemented by the project proponent prior to, during, and upon completion of dredging activities. The DMP shall contain the following elements, each of which have specific timing mechanisms as identified in the description of each element below:

A. *Dredging Operations Plan.* The project proponent shall develop a Dredging Operations Plan that identifies the standard operating procedures (SOPs) that will be implemented during dredging activities. The Dredging Operations Plan shall include step-by-step procedures to complete dredging operations safely, in an efficient manner, and to avoid releases of hazardous materials into the environment (i.e., from the resuspension of contaminated sediments as well as contaminants associated with construction activities such as oil or other equipment-related hazardous materials). The SOPs shall include guidance with respect to, among other things, the following:

- Proper operation of the dredge bucket.
- Proper positioning of the barge vessel to minimize propeller wash.
- Placement and maintenance of double silt curtains.
- Proper operation and maintenance of all construction equipment.

In addition, the Dredging Operations Plan shall identify sediment control BMPs to be implemented during dredging activities. The project proponent, or their contractor, shall at a minimum, implement the following BMPs for the safe handling of dredged material:

- **Sediment Unloading.** During dredging activities, the contractor shall reduce water column impacts by controlling the swing radius of the unloading equipment, using a spillage plate, and using a power wash unit to reduce impacts related to spillage from the excavator arm onto transport vehicles.
 - **Filling Transport Vehicles.** During dredging activities, the contractor shall ensure that truck volumes are limited to 90 percent based on visual observations, and that trucks shall be covered and secured per California Department of Transportation (Caltrans) regulations during transport to the disposal facility.
 - **Sediment Loading.** During dredging activities, the contractor shall ensure that trucks are loaded within a constructed loading zone to confine sediment spilled during the loading process.
- B. *Contingency Plan.* The project proponent shall develop a Contingency Plan, which shall be implemented in the case of equipment or operational failures, such as, but not limited to, silt curtain damage, spillage of sediment resulting from overloading the material barge, contact with sediment on or around the materials barge during loading, equipment failure of bucket or shear pin during loading procedures, or material barge or tugboat collision with another vessel. The Contingency Plan shall contain step-by-step procedures for response to equipment or operational failures and shall reduce the potential for the release of sediments to the water column outside the silt curtains.
- C. *Health and Safety Plan for Dredging Activities.* The project proponent shall prepare a Health and Safety Plan for Dredging Activities (Health and Safety Plan) and shall implement the Health and Safety Plan for the duration of the dredging activity. The Health and Safety Plan shall be prepared in general accordance with Federal Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) and California Code of Regulations, Title 8, Section 5192. The Health and Safety Plan shall provide procedures for workers for safe operation, personal protection, and emergency response during dredging operations.
- D. *Communication Plan.* The project proponent shall prepare a Communication Plan and operation guidelines for communications between the U.S. Coast Guard and Harbor Police and all vessel operators to ensure the safe movement of project vessels from the dredge site to the unloading area. The contractor shall implement the Communication Plan throughout the duration of dredging activities.

MM-WQ-5: Implement a Sediment Management Program. Prior to the District's approval of any future development involving dredging within an area of known or suspected sediment contamination, the project proponent shall prepare a Sediment Management Program to be implemented prior to and throughout the duration of waterside construction activities. The Sediment Management Program shall be implemented in accordance with CWA Section 401 and 404 requirements, at a minimum, as well as other project-specific mitigation measures or enhanced BMPs. This will include the following elements, each of which have specific timing mechanisms, as identified in the description of each element below:

- A. *Sampling and Analysis Plan (SAP)*
- B. *Contaminated Sediment Management Plan (if contamination is found during implementation of the SAP)*

C. Post-Construction Sampling and Analysis

Sampling and Analysis Plan (SAP) Preparation and Implementation. The SAP shall be approved by the USACE/EPA using USACE/EPA guidance documents for sediment testing based on either the “green book” or “inland testing manual,” and shall determine and delineate the area of potential disturbance (Disturbance Area); implement the agency approved SAP; and compile the findings of the sediment testing program in a Sediment Characterization Report for submittal to the District and regulatory agencies. The SAP shall include project-specific details identified in regulatory guidance and shall set forth the methodology to be used, the locations where sampling would occur, analysis of the constituents of concern, and proper decontamination and disposal procedures. The sediment samples shall be tested for the presence of the COCs. The sampling area and sampling methodology shall identify sample locations determined to be appropriate delineating the vertical and lateral extent and concentration of the project site’s potential COCs, at the discretion of the USACE, EPA, and RWQCB (or other applicable agencies), in concurrence with the District to adequately characterize any Disturbance Area associated with dredging. The SAP must be submitted to the District for concurrence and the EPA and USACE for approval. Sediment sampling and analysis shall be performed in accordance with the requirements of the SAP to determine whether the sediment is contaminated.

The results of all sediment sampling shall be documented in a Sediment Characterization Report and submitted to the District for concurrence and USACE, EPA, and RWQCB for their approval prior to any marine-side sediment-disturbing activities. The project shall be implemented in accordance with the regulatory permits and any project-specific conditions.

Contaminated Sediment Management Plan (Sediment Management Plan). If contaminated sediment is identified based in sediment sampling, the project proponent shall prepare a Contaminated Sediment Management Plan, which shall be submitted to the District for concurrence and the appropriate regulatory agencies for approval. Once approved, the Contaminated Sediment Management Plan shall be implemented by the project proponent and be subject to oversight by the appropriate regulatory agencies, as well as the District. The Contaminated Sediment Management Plan shall describe in detail the methods to be employed to minimize disturbance of contaminated sediment during waterside construction activities (as identified in the SAP) and the monitoring that will occur during construction activities.

Post-Construction Sampling and Analysis. At the conclusion of construction activities within an area with known or suspected COCs (not including areas of maintenance dredging that have been determined suitable for beneficial reuse or other unconfined aquatic disposal options as approved by the EPA and USACE), the project proponent shall conduct post-construction sediment quality confirmation sampling. This sampling will be performed in the manner and to the extent determined by the EPA, USACE, and RWQCB to be necessary to adequately characterize potential residual contamination resulting from construction activities. The project proponent shall prepare, for submittal to the District for concurrence and approval by the EPA, USACE, and RWQCB, a Post-Construction Sampling Plan that shall outline the methodology to be used, the locations where sampling would occur, and the COCs to be analyzed.

MM-WQ-6: Implement Post-Dredging Remediation. If, after the completion of any dredging activity in an area with COCs, consistent with the requirements of **MM-WQ-4** and **MM-WQ-5**, post-dredge sediment quality confirmation sampling shows that concentrations of COCs exceed

those set forth by the RWQCB or other regulatory agency with jurisdiction, the project proponent shall propose and conduct additional dredging consistent with levels prescribed by the RWQCB or other regulatory agency with jurisdiction, subject to approval by the RWQCB or other regulatory agency with jurisdiction, and concurrence by the District. The project proponent's remediation approaches may include, but are not limited to, additional dredging, placement of sand cover, or Enhanced Monitored Natural Recovery sand containing active carbon. If additional dredging is required, the remediation shall be conducted with oversight from the appropriate local, State, and Federal regulatory agencies. In addition, documentation evidencing the remediation work and completion thereof shall be submitted by the project proponent to the District. The project proponent shall monitor the remediation for its effectiveness, consistent with the standards, schedules, and reporting requirements set forth by the RWQCB. A monitoring report shall be submitted by the project proponent to the District and the RWQCB for their review at a frequency determined appropriate by the RWQCB.

If, after the completion of any dredging activity within a disturbance area, consistent with the requirements of **MM-WQ-4** and **MM-WQ-5**, concentrations of COCs in the area of potential contamination do not exceed those levels set forth by the RWQCB, no further mitigation is required.

MM-WQ-7: Remove and Dispose of Creosote Piles Properly. During extraction of creosote treated piles, if piles cannot be completely removed, the project proponent shall cut them at least 1 foot below the mud line. If treated piles are fully extracted or if they are cut below the mudline, the project proponent shall cap the holes or piles with appropriate material such as clean sand. The project proponent shall dispose of removed creosote-treated piles in a manner approved by the District and applicable agencies that precludes their further use. The methodology for removal of creosote-treated piles is the same as non-treated piles with the exception that should any pile cutting shall be hand-collected and/or screened from the water for disposal at an appropriate waste facility (for creosote-treated wood guidelines, please see NOAA Fisheries Guidelines [NOAA Fisheries SW 2009] and EPA's Ecological Risk Assessment for Creosote [EPA 2008]). Creosote pile handling and disposal follows typical contaminated material methods with the manifest documented and the licensed landfill recorded (*Best Management Practices and Environmental Standards for Overwater Structural Repair and Maintenance Activities for Existing Port Facilities Conducted by the San Diego Unified Port District*, 2019).

The piles must be cut into manageable lengths for transport and disposal by the project proponent in an approved upland location. Extracted piles and debris should be placed by the project proponent in a lined stockpile area or directly loaded into a transport container or vehicle. Appropriate landside discharge controls (i.e., stormwater BMPs, including the use of tarps, wattles, and/or berms) approved by the District shall be identified by the project proponent prior to pile removal and implemented to prevent runoff from leaving the stockpile and entering surface- or groundwater.

For **Impact-WQ-2**:

MM-WQ-8: Prepare and Implement a Marina Best Management Practice Plan and Copper Reduction Measures. To reduce potential impacts on water quality, the project proponent shall prepare a Marina Best Management Practice Plan specifically identifying best management practices that will be used within the Marina to (1) minimize the pollutant load, including

measures to prevent, eliminate, and/or otherwise effectively protect water quality of the Bay and (2) reduce inputs of total and dissolved copper resulting from increased berthing of boats. Best management practices would be designed to adhere with the water quality criteria defined in the Basin Plan. The Marina Best Management Practice Plan and copper reduction measures shall be reviewed and approved by the District prior to the District's approval of a future development involving new or expanded marina operations. The project proponent shall be responsible for implementation and maintenance of the Marina Best Management Practice Plan and copper reduction measures, which at a minimum, shall include, but not be limited to, the following:

- Use of educational materials provided to boat owners and their crews by the project proponent, that specify types of activities that shall be avoided and types of BMPs that shall be implemented in order to protect water quality (e.g., no in-slip refueling). Recommendations to reduce oil leaks include conducting periodic maintenance of all fuel lines, hoses, and gaskets; putting an oil-absorbent pad in the bilge; and installing a filtration system to remove oil from bilge water.
- Docking agreements containing specific use restrictions to prevent degradation of water quality, such as restricting boat repairs and cleaning operations within the marinas. These specific use restrictions shall be similar to the recommendations from the *San Diego Bay Boaters Guide* (District 2006) and the California State Parks Division of Boating and Waterways' and California Coastal Commission's Boating Clean and Green Program (California DBW 2017), both of which promote environmentally sound boating practices to marine business and boaters in California.
- Provide information to marinas and boat owners to support copper reduction, including hull-cleaning BMPs that comply with the District's in-water hull cleaning ordinance and other applicable laws and regulations (Ordinance No. 2681).¹²
- Implementation of an incentive structure within the docking agreements' rent rates for occupants with non-copper hull paint boats.
- Identification of copper-free zones within the innermost portions of the marina, or limitation of copper hull paint boats to only well-flushed zones of the marina.
- Prohibition of hull bottom scraping and the use of toxic detergents to clean vessels topside, and no overwater repairs.
- Limitations on in-slip hull cleaning (restrict or limit number of cleanings per year).

The project proponent shall include a baseline assessment of dissolved copper levels within the project footprint prior to construction. Baseline conditions shall be compared to the periodic monitoring (annually at a minimum) to assess increases in copper directly attributed to project operations.

Dissolved copper levels shall be compared to Basin Plan and TMDL-specific water quality objectives.

¹² Ordinance No. 2681 terms and conditions addressing the use of best management practices for in-water hull cleaning state: "1. No Person shall perform In-Water Hull Cleaning without complying with Best Management Practices generally recognized by the industry as being effective and environmentally sound. 2. No Person shall perform In-Water Hull Cleaning that results in visible paint plume or cloud."

The project proponent shall submit a baseline monitoring report and periodic monitoring reports (annually at a minimum) to the District for its review. If at any time during monitoring the water quality equals or exceeds the Basin Plan water quality objectives, the District shall require an update to the project's Marina Best Practice Management Plan to include additional BMPs to reduce copper attributed to the project and bring the water quality back into compliance with the Basin Plan.

For **Impact-WQ-3**:

MM-WQ-9: Conduct Water Quality Monitoring of Aquaculture Operations. Prior to the District's approval of an aquaculture project, the project proponent shall (1) conduct a siting study to predict potential water quality impacts due to physical factors such as reduced flushing as well as any potential operational impacts, (2) develop an aquaculture water quality monitoring plan consistent with the requirements of the Shellfish Aquaculture Mitigation Plan, and (3) identify site-specific BMPs to be implemented during operation of the aquaculture facility to lessen or eliminate potential water quality impacts. The project proponent shall submit the siting study, monitoring plan, and BMPs to the District for review and approval. The siting study shall include physical site-specific characteristics that may influence the local waterbody (e.g., hydrodynamic conditions, nearby natural resources, potential impacts on navigation). The water quality monitoring plan shall include an existing conditions report, an outline of water quality monitoring parameters and objectives as issued by relevant permitting authorities and resource agencies. Throughout the duration of the project's operations, the project proponent shall comply with relevant permit conditions issued by permitting authorities and shall implement the water quality monitoring plan, as issued, reviewed, and approved by the appropriate regulatory and resource agencies in coordination with the District, which shall ensure water quality is not impaired by the proposed aquaculture operation. If at any time during this monitoring, the water quality equals or exceeds the Basin Plan's water quality objectives, as updated and amended, the project proponent shall immediately notify the relevant permitting authorities and the District, and shall immediately identify specific actions that would eliminate the water quality impairments, approved by the relevant permitting authorities and the District.

Approved BMPs shall include a regular monitoring, reporting, and site inspection program, as issued through operational permit conditions by relevant permitting authorities and resource agencies, to ensure that the operations are in compliance with BMPs related to the specific type of aquaculture being implemented.

Level of Significance After Mitigation

In order to address both the possibility of contaminated sediment disturbance and its release into the water column (**Impact-WQ-1**) monitoring of turbidity and constituents of concern would be implemented to verify that dredging activities do adversely affect beneficial uses in San Diego Bay. As required by **MM-WQ-1**, if water quality objectives are violated, the project proponent would temporarily halt activity and would implement all additional measures necessary to protect water quality per CWA Section 401 and 404 permits. To assist with avoiding exceeding the Basin Plan or project-specific water quality objectives, future projects would employ standard BMPs during in-water construction to minimize resuspension, spillage, and misplaced sediment (**MM-WQ-2**). Silt curtains would be used for activities resulting in sediment disturbance during dredging of areas with known or suspected sediment contamination and pile driving operations (**MM-WQ-3**), and to

contain the resuspension of sediment and prevent the associated dispersal of constituents of concern and sediments outside the construction work area. Mitigation measure **MM-WQ-4** would require future project proponents to develop and implement a Dredging Management Program per EPA and USACE requirements to complete dredging operations safely, in an efficient manner, while minimizing the resuspension of contaminated sediments in the Bay (i.e., resuspension of contaminated sediments do not exceed turbidity measurements by 20%, taken in a designated reference location nearby, but outside of the project area), and ensuring the proper disposal of any contaminated sediments in an approved disposal facility using best management practices. Mitigation measure **MM- WQ-5** requires future project proponents to implement a (Waterside) Sediment Management Program. **MM-WQ-6** requires future project proponents to propose and conduct additional dredging of the site if, after in-water construction activities and dredging are complete, sediment quality confirmation sampling shows exceedances of constituents of concern. Lastly, **MM-WQ-7** requires that removed creosote-treated piles be disposed of in a manner that precludes their further use.

While implementation of **MM-WQ-1** through **MM-WQ-7** would minimize potential water quality impacts associated with sediment contamination (**Impact-WQ-1**), it is still possible that in-water construction activities could disturb contaminated sediment and thereby release it into the water column. Additionally, approval authority of the methods for in-water construction is within the jurisdiction of Federal and State agencies; the District has concurrent jurisdiction. As such, while the District has required measures to minimize impacts associated with contaminated sediment, the RWQCB and/or other Federal and State agencies also have regulatory authority to approve specific methods for in-water construction in concurrence with the District. As such, the District would not have final approval and thus cannot guarantee that implementation of the mitigation measures would reduce the impact to less than significant. Consequently, **Impact- WQ-1** would be significant and unavoidable.

To address the potential for future expansion of marinas in PD2, PD3, PD9, and PD10 to contribute to, and potentially worsen, existing copper impairments (**Impact-WQ-2**), future project proponents would be required to develop a Marina Best Management Practice Plan to reduce inputs of total and dissolved copper resulting from increased vessel activity within the marinas (**MM-WQ-8**). With implementation of **MM-WQ-8**, impacts from copper leaching would be lessened; however, the net increase in the number of vessels with copper-based paints used on their hulls would result in a significant and unavoidable impact (**Impact-WQ-2**).

To address the potential impacts on water quality from aquaculture (**Impact-WQ-3**), **MM-WQ-9** requires future aquaculture operations to develop an aquaculture water quality monitoring plan, to comply with relevant permit conditions issued by permitting authorities, and to implement BMPs including water quality monitoring before, during, and after aquaculture operations are in place. Because any exceedances from aquaculture operations would be rectified with implementation of **MM-WQ-9**, **Impact-WQ-3** would be reduced to less than significant.

Threshold 2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact Analysis

Impacts of Water and Land Uses

The proposed PMPU would increase the demand for water from water providers serving the proposed PMPU area, some of which is derived from groundwater sources. For the existing conditions of the groundwater supply within and adjacent to the proposed PMPU area, as well as the effects of groundwater demand from future development allowed under the proposed PMPU, see Section 4.15, *Utilities and Service Systems*. The impact analysis here focuses on physical interference with groundwater recharge associated with impervious surfaces.

Although groundwater is present at each of the planning districts, it is largely seawater and brackish water. According to the 2016 San Diego Region Basin Plan, none of the planning districts, with the exception of PD7 (see below), have beneficial uses designated for groundwater, and these areas have been exempted by the RWQCB from the municipal use designation.

Projects developed under the proposed PMPU could replace a portion of existing pervious surfaces that contribute to some groundwater recharge; however, those projects would not interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. This is because the groundwater is mainly seawater infiltrating the soils under the planning districts, which, as indicated, is not used for municipal purposes. As such, groundwater recharge would not be reduced by the proposed PMPU. In addition, redevelopment of existing older development within the proposed PMPU area, which may not contain stormwater infiltration systems, would include the addition of biofiltration features and improve the potential for groundwater recharge compared to existing conditions. Similarly, because groundwater underlying the PMPU area is not used for municipal purposes, groundwater is unlikely to be extracted or decreased for municipal purposes. As such, the operation of future development projects allowed under the proposed PMPU would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge within the proposed PMPU area. Given the PMPU would not result in significant impacts on groundwater, the PMPU is not anticipated to conflict with sustainable management of the groundwater basin.

Planning District 7 is located over the Coastal Plain of San Diego Groundwater Basin.¹³ Future activities allowed in PD7 would be minor and would be primarily related to habitat conservation, restoration, enhancement, mitigation banking, aquaculture, scientific and environmental research, and marine technology. The portions of PD7 that are within the Coastal Plain of San Diego Groundwater Basin would still allow for groundwater recharge, and groundwater would not be expected to support these uses.

In sum, implementation of the proposed PMPU, including its ultimate buildout, would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge

¹³ The Basin Plan (San Diego RWQCB 2016) provides beneficial uses of groundwater hydrologic areas and subareas within the larger Coastal Plain of San Diego groundwater basin.

within the proposed PMPU area, and no conflict with the sustainable management of the groundwater basin would occur. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, the implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to substantial decrease of groundwater supplies or interfere with sustainable groundwater management.

Construction and operational activities associated with the new Waterfront Destination Park would include the development of biofiltration features and would improve the potential for groundwater recharge compared to existing conditions. Because groundwater underlying PD3 is not used for municipal purposes, groundwater is unlikely to be extracted or decreased for municipal purposes as part of Option 1. Therefore, construction and operation of Option 1 would not result in any additional or more severe impacts related to groundwater supply and the sustainable management of the groundwater basin than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, the implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to substantial decrease of groundwater supplies or interfere with sustainable groundwater management.

Construction and operational activities associated with the expanded Lane Field Setback Park would include the development of biofiltration features and would improve the potential for groundwater recharge compared to existing conditions. Because groundwater underlying PD3 is not used for municipal purposes, groundwater is unlikely to be extracted or decreased for municipal purposes as part of Option 2. Therefore, construction and operation of Option 2 would not result in any additional or more severe impacts related to groundwater supply and the sustainable management of the groundwater basin than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, the implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to substantial decrease of groundwater supplies or interfere with sustainable groundwater management.

Construction and operational activities associated with the new park space that could be developed under Option 3 would include the development of biofiltration features and would improve the potential for groundwater recharge compared to existing conditions. Because

groundwater underlying PD3 is not used for municipal purposes, groundwater is unlikely to be extracted or decreased for municipal purposes as part of Option 3. Therefore, construction and operation of Option 3 would not result in any additional or more severe impacts related to groundwater supply and the sustainable management of the groundwater basin than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

There are no policies in the proposed PMPU relating to the protection of groundwater supplies or avoiding interfering substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Therefore, the impacts of the proposed PMPU Element Policies are neither adverse nor beneficial as they relate to groundwater recharge and management.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the project may impede sustainable groundwater management of the basin. Impacts would be less than significant, and no mitigation measures are required.

Threshold 3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would:

i. Result in substantial erosion or siltation on- or off-site?

ii. Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site, substantially affecting the existing environment?

iii. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

iv. Impede or redirect flood flows?

Impact Analysis

Impacts of Water and Land Uses

Construction

Approval of the proposed PMPU would not directly result in any specific construction project, including the construction of any buildings or extension of roads into previously undeveloped areas. However, it is reasonably foreseeable that construction activities would result from future

development projects that meet the water and land use designation requirements and abide by the policies and standards set forth by the proposed PMPU.

Erosion and Siltation

Erosion is a group of natural processes, including weathering, dissolution, abrasion, corrosion, and transportation, by which material is worn away from the Earth's surface. Siltation is sediment suspended in stagnant water or carried by moving water, which often accumulates on the bottom of rivers, bays, and other bodies of water—which is known as sedimentation. Ground-disturbing activities associated with construction activities under the proposed PMPU could expose soils to the erosional forces of wind and water during storm events, potentially resulting in erosion and sedimentation on and off the planning districts, and result in the discharge of silt into the Bay in the absence of regulatory requirements.

To minimize the potential for erosion from water and wind, as well as siltation from runoff into the Bay, construction activities proposed consistent with the PMPU that would disturb more than 1 acre of land would be required to comply with the Construction General Permit, which would require development and implementation of a SWPPP by a Qualified SWPPP Developer. The SWPPP would be reviewed and approved by the District, and subject to review by the RWQCB, and would identify what construction BMPs would be implemented in order to protect stormwater runoff and include a monitoring plan for measuring BMP effectiveness. BMPs are required to be inspected regularly by a Qualified SWPPP Practitioner. The Qualified SWPPP Practitioner monitors the construction activities to ensure the BMPs listed in the SWPPP are implemented and performing as anticipated. For projects under 1 acre of land, PMPU construction activities would still need to comply with the District's JRMP, which requires preparation of a Construction BMP Plan that would be subject to review and approval by the District, and review by the RWQCB. The Construction BMP Plan requires the same construction BMPs as a SWPPP, but does not include as many post-construction BMPs. Projects that would disturb less than 1 acre, but more than 100 square feet, would need to prepare and implement a Construction BMP Plan.

In either case—a SWPPP or a Construction BMP Plan—the District would require the project applicant to implement a variety of construction BMPs (see Section 4.8.3 above for a list of potential BMPs) throughout the various construction phases in order to protect water quality. The construction SWPPP or Construction BMP Plan would specify properly designed, centralized storage areas that keep these materials away from rain and associated runoff. When grading is conducted during the rainy season, the primary BMPs selected would focus on erosion control (i.e., keeping sediment in place) and then on soil control (i.e., keeping soil on site). Measures would include a range of stormwater control BMPs: for example, installing erosion control such as silt fences, staked fiber rolls, and geofabric to prevent silt runoff to storm drains or waterways. Topsoil and backfill would be stockpiled, protected, and replaced at the conclusion of construction activities. Disturbed soil would be revegetated as soon as possible with the appropriate selection and schedule for turf, plants, and other landscaping vegetation.

Therefore, because construction activities are already regulated by existing laws, regulations, and District programs (e.g., Construction General Permit, District's JRMP, Dewatering Permit) and the District has specific water quality best practices during construction activities as listed in the JRMP and subject to District approval, substantial soil erosion or topsoil loss would not occur during construction activities. Impacts from erosion and siltation would be less than significant.

Stormwater Drainage System Sources of Additional Pollutants

As identified above, drainage systems may be temporarily modified during the construction of future development projects allowed under the proposed PMPU. However, implementation of the SWPPP or Construction BMP Plan would include several BMPs (examples of which are discussed above) that would slow onsite runoff and ensure that the available capacity of the existing stormwater facilities would be sufficient for anticipated increases in BMP-treated runoff water. As a result, construction of the projects that would be reasonably foreseeable under the proposed PMPU would not create or contribute runoff water that would exceed the available capacity of existing stormwater drainage systems. Moreover, as discussed above, BMPs would be implemented to reduce the discharge of construction pollutants. Impacts related to the alteration of existing drainage patterns during construction, which could exceed stormwater drainage system capacities or provide substantial sources of additional pollutants, would be less than significant.

The planning districts are generally flat areas and would not result in substantial erosion off site during construction activities with implementation of a SWPPP or a Construction BMP Plan. With implementation of BMPs during construction, substantial sources of additional pollutants would be reduced, and impacts would be less than significant.

Stormwater Drainage System Capacity/Impeding or Redirecting Flood Flow

The District will require project proponents to implement BMPs in accordance with the Construction General Permit and/or the District's JRMP (see Section 4.8.3 for a list of BMPs) during construction to ensure the drainage system stays operational and is not altered significantly from the existing condition, which would ensure water volumes and velocities would be accommodated from construction-related water use and during a storm event. Impacts related to the alteration of existing drainage patterns during construction, which could result in flooding, would therefore be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to substantially altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would: result in substantial erosion or siltation on- or off site; result in flooding on- or off site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.

Construction activities associated with the new Waterfront Destination Park could include ground-disturbing activities that could contribute to erosion, runoff, and siltation. However, construction under Option 1 would occur in compliance with the requirements of the

Construction General Permit and the District's JRMP, which require BMPs that would reduce, filter, and treat stormwater runoff during construction. Therefore, construction under Option 1 would not result in any additional or more severe impacts related to substantial alteration of the existing drainage pattern of the site or area than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, the implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to substantially altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would: result in substantial erosion or siltation on- or off site; result in flooding on- or off site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.

Construction activities associated with the new expanded Lane Field Setback Park could include ground-disturbing activities that could contribute to erosion, runoff, and siltation. However, construction under Option 2 would occur in compliance with the requirements of the Construction General Permit and the District's JRMP, which require BMPs that would reduce, filter, and treat stormwater runoff during construction. Therefore, construction under Option 2 would not result in any additional or more severe impacts related to substantial alteration of the existing drainage pattern of the site or area than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive k

As discussed above, the implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to substantially altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would: result in substantial erosion or siltation on- or off site; result in flooding on- or off site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.

Construction activities associated with the new park space that could be developed under Option 3 could include ground-disturbing activities that could contribute to erosion, runoff, and siltation. However, construction under Option 3 would occur in compliance with the requirements of the Construction General Permit and the District's JRMP, which require BMPs intended to reduce, filter, and treat stormwater runoff during construction. Therefore, construction under Option 3 would not result in any additional or more severe impacts related to substantial alteration of the existing drainage pattern of the site or area than buildout of the proposed PMPU without Option 3.

Operation

Erosion and Siltation

During operation of future development, the impervious surface area could be changed by individual projects compared to the pre-project conditions and could result in an increase of

impervious surface area. Consequently, the amount of stormwater runoff would also increase, which could increase the amount of runoff entering the Bay. This increase, however, is anticipated to be minor given the planning districts are largely built out and unlikely to substantially change any drainage patterns that could result in increased erosion or siltation. However, it is reasonably foreseeable that there would be an increase in impervious surfaces in PD2 given the proposed planned improvements that could potentially occur. As discussed under Threshold 1, the District's JRMP requires post-construction BMPs, which are required to stabilize the disturbed soil areas to limit erosion following construction activities. In addition, stormwater facilities are currently required to retain (i.e., intercept, store, infiltrate, evaporate, and evapotranspire) and to reduce the discharge of runoff, which further limits the potential for erosion following construction activities. Therefore, with project proponents' compliance with these requirements, future development projects allowed under the proposed PMPU would not result in significant impacts related to erosion and siltation during operations.

Stormwater Drainage System Sources of Additional Pollutants

Similar to existing conditions, the operation of future development projects allowed under the proposed PMPU would be expected to generate pollutants of concern typically associated with commercial uses, restaurants, roads, parking areas, and landscaping. Such pollutants include trash and debris from site visitors, oil and grease from equipment and vehicles, oxygen-demanding substances, bacteria and pathogens from food disposal, heavy metals from equipment and structures, and organic compounds. Other potential pollutants of concern include pesticides and nutrients from landscape.

As described above, projects under the proposed PMPU would be operated in accordance with the District's JRMP and Article 10 and would be required to implement post-construction BMPs through the preparation and implementation of a project-specific SWQMP. The future development projects allowed under the proposed PMPU would implement site design, source control, and pollutant control BMPs consistent with the District's JRMP and *BMP Design Manual*. Site design and source control BMPs are the minimum management practices, control techniques, and design and engineering methods to be included in the planning design for all projects to reduce the discharge of pollutants from the development. Priority Development Projects must also implement pollutant control BMPs. Implementation of site design, source control, and pollutant control BMPs would not only result in a reduction in pollutants discharged from the project site, but also would reduce stormwater runoff generated by the project site. As a result, the future development projects would not create or contribute runoff water that would provide substantial additional sources of polluted runoff.

Stormwater Drainage System Capacity/Impeding or Redirecting Flood Flow

Areas within the proposed PMPU area that are prone to flooding under existing conditions are discussed in Section 4.8.2.1, *Surface Water Hydrology and Flood Hazards*. Most of the planning districts are largely built out (PD3) or would undergo little to no additional development (e.g., PD1, PD4, PD7, PD8, PD9, PD10). As such, the proposed PMPU would not result in a substantial increase in impervious surfaces compared to existing conditions. However, projects constructed within the proposed PMPU area could result in some increase in impervious surfaces compared to the existing condition, particularly in PD2. This would be evaluated case by case as part of the site-specific Drainage Study for future projects under the proposed PMPU, and project-specific design features such as detention would be implemented when necessary. In addition, any future development

would be required to comply with the drainage design guidelines, standards, and ordinances of the applicable member city in which the project is located. Moreover, future development projects would generally discharge directly to San Diego Bay and would not result in flooding off site due to the nature of the receiving Bay waters (i.e., not a typical channel with bed and banks subject to erosion or overtopping). Therefore, future development projects would not include substantial changes to the existing storm drain system that would result in substantial flooding on- or off site. As such, impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, operation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to substantially altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would: result in substantial erosion or siltation on- or off site; result in flooding on- or off site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.

The new Waterfront Destination Park could include impervious surfaces such as pedestrian pathways that could contribute to erosion, runoff, and siltation during operation. However, operation of recreational uses under Option 1 would occur in compliance with the District's JRMP and Article 10 which requires post-construction BMPs that would reduce, filter, and treat stormwater runoff. Moreover, it is anticipated that the new Waterfront Destination Park would consist primarily of pervious surfaces (e.g., grass), which would further reduce the potential for stormwater runoff. Therefore, operation of Option 1 would not result in any additional or more severe impacts related to substantial alteration of the existing drainage pattern of the site or area than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, operation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to substantially altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would: result in substantial erosion or siltation on- or off site; result in flooding on- or off site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.

The expanded Lane Field Setback Park could include impervious surfaces such as pedestrian pathways that could contribute to erosion, runoff, and siltation during operation. However, operation of recreational uses under Option 2 would occur in compliance with the District's

JRMP and Article 10 which requires post-construction BMPs that would reduce, filter, and treat stormwater runoff. Moreover, it is anticipated that any new park space would consist primarily of pervious surfaces (e.g., grass), which would further reduce the potential for stormwater runoff. Therefore, operation of Option 2 would not result in any additional or more severe impacts related to substantial alteration of the existing drainage pattern of the site or area than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, operation of the proposed PMPU, including within PD3, would result in less-than-significant impacts related to substantially altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would: result in substantial erosion or siltation on- or off site; result in flooding on- or off site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.

New park space that could be developed under Option 3 could include impervious surfaces such as pedestrian pathways that could contribute to erosion, runoff, and siltation during operation. However, operation of recreational uses under Option 3 would occur in compliance with the District's JRMP and Article 10 which requires post-construction BMPs that would reduce, filter, and treat stormwater runoff. Moreover, it is anticipated that any new park space would consist primarily of pervious surfaces (e.g., grass), which would further reduce the potential for stormwater runoff. Therefore, operation of Option 3 would not result in any additional or more severe impacts related to substantial alteration of the existing drainage pattern of the site or area than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts associated with substantial alteration of the existing drainage pattern of the site or area, in a manner that would result in erosion, siltation, flooding, exceeding capacities of storm drains or redirecting flood flows. Rather, the proposed PMPU policies listed in Section 4.8.4.3 would reduce potential impacts from alteration of drainage patterns by prioritizing the protection and enhancement of water quality (ECO Policy 2.1.1), reinforcing compliance with the MS4 permits and other legal requirements to minimize pollution impacts (ECO Policy 2.3.1), and providing educational information to the public and tenants regarding natural resources protection, runoff or increased runoff flows, and pollution prevention measures to minimize or reduce impacts on water and sediment quality (ECO Policy 2.3.2).

Impact Determination and Mitigation

Implementation of the proposed PMPU would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would: result in substantial erosion or siltation on- or off site; result in flooding on- or off site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. Compliance with applicable laws and

regulations will ensure that impacts would be less than significant, and no mitigation measures are required.

Threshold 4: Risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones?

Impact Analysis

Impacts of Water and Land Uses

As shown on Figure 4.8-10, each planning district is partially within a designated tsunami hazard zone; the waterside portion is entirely within the tsunami hazard zone, and a small portion of the landside frontage of the planning districts at some locations is within the designated tsunami hazard zone (Department of Conservation 2009). Seiches would also be possible given the Bay geography and associated peninsulas, which act as semi-enclosed water bodies. Areas within the proposed PMPU area that are prone to flooding are discussed in Sections 4.8.2.1 and 4.8.2.3. As shown on Figures 4.8-2 through 4.8-9, each of the planning districts contain areas that are prone to flooding.

Industrial land uses typically have more hazardous materials and activities that result in pollutant discharges. As such, industrial land uses are more at risk for release of pollutants compared to recreational and commercial land uses. To the extent that the proposed PMPU would increase industrial land uses, these areas would have a slightly increased potential to risk release of pollutants if inundated.

While it is reasonably foreseeable that inundation from a tsunami or flooding could occur in certain areas of the proposed PMPU area, future development that is consistent with the proposed PMPU water and land uses would not significantly exacerbate the risk of pollutant release because of the limited amount of industrial development that is anticipated to occur and because new buildings would be designed to avoid inundation from flooding per FEMA regulations, which require that future structures proposed within a flood zone must be designed to ensure that the floor elevation is raised at least 1 foot above the floodplain elevation and meets the structural requirements of FEMA to avoid any damage to persons or structures as a result of a 100-year flood. In addition, as discussed in Section 4.7, *Hazards and Hazardous Materials*, the operation of future development consistent with these water and land uses would use common hazardous materials, such as petroleum-based substances for mechanical and motorized equipment, vessels, and vehicles; and solvents, lubricants, and cleaners for facility maintenance. However, the storage, use, and disposal of hazardous materials during operation of future development would be regulated by the applicable oversight agencies and regulations, including the local Certified Unified Program Agency (CUPA) (County Department of Environmental Health [DEH]), U.S. Department of Transportation (DOT) Hazardous Materials Regulations, Department of Toxic Substances Control (DTSC), U.S. Coast Guard (USCG), San Diego RWQCB, California Highway Patrol, and Caltrans (see Section 4.7.3 for additional details). Therefore, impacts related to the risk of releasing pollutants due to project inundation in flood hazard, tsunami, or seiche zones would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU

land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts associated with the release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones.

Construction and operational activities associated with the closure of North Harbor Drive and a new Waterfront Destination Park under Option 1 would not introduce any new industrial land uses, which are the land uses most likely to result in a release of pollutants in the event of inundation from a tsunami or flooding. In addition, future development under Option 1 would be designed to avoid inundation from flooding per FEMA regulations, and would handle potentially hazardous materials in compliance with applicable oversight agencies and regulations, including the local CUPA (County DEH), DOT Hazardous Materials Regulations, DTSC, USCG, San Diego RWQCB, California Highway Patrol, and Caltrans. Therefore, construction and operation under Option 1 would not result in any additional or more severe impacts related to the release of pollutants as a result of inundation in flood hazard, tsunami, or seiche zones than would the buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts associated with the release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones.

Construction and operational activities associated with the expanded Lane Field Setback Park under Option 2 would not introduce any new industrial land uses, which are the land uses most likely to result in a release of pollutants in the event of inundation from a tsunami or flooding. In addition, future development under Option 2 would be designed to avoid inundation from flooding per FEMA regulations, and would handle potentially hazardous materials in compliance with applicable oversight agencies and regulations, including the local CUPA (County DEH), DOT Hazardous Materials Regulations, DTSC, USCG, San Diego RWQCB, California Highway Patrol, and Caltrans. Therefore, construction and operation under Option 2 would not result in any additional or more severe impacts related to the release of pollutants as a result of inundation in flood hazard, tsunami, or seiche zones than would the buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in less-than-significant impacts associated with the release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones.

Construction and operational activities associated with the new park space that could be developed under Option 3 would not introduce any new industrial land uses which are the land uses most likely to result in a release of pollutants in the event of inundation from a tsunami or flooding. In addition, future development under Option 3 would be designed to avoid inundation from flooding per FEMA regulations, and would handle potentially hazardous materials in

compliance with applicable oversight agencies and regulations, including the local CUPA (County DEH), DOT Hazardous Materials Regulations, DTSC, USCG, San Diego RWQCB, California Highway Patrol, and Caltrans. Therefore, construction and operation under Option 3 would not result in any additional or more severe impacts related to the release of pollutants as a result of inundation in flood hazard, tsunami, or seiche zones than would the buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts associated with the release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. Rather, the proposed PMPU policies listed in Section 4.8.4.3 would reduce potential impacts from potential release of pollutants from inundation by prioritizing the protection and enhancement of water quality (ECO Policy 2.1.1), reinforcing compliance with the MS4 permits and other legal requirements to minimize pollution impacts (ECO Policy 2.3.1), and implementing waste management strategies throughout Tidelands with a focus on reducing trash entering waterways (ECO Policy 2.1.3).

Impact Determination and Mitigation

Implementation of the PMPU would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. Impacts would be less than significant, and no mitigation measures are required.

Threshold 5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Analysis

Impacts of Water and Land Uses

Conflict with or Obstruct Implementation of a Water Quality Control Plan

Threshold 1 addresses the question of whether the PMPU would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface- or groundwater quality. The analysis under that threshold addresses the San Diego Basin Plan, which is the region's water quality control plan and establishes water quality objectives and includes TMDLs.

Waterside Construction

As discussed under Threshold 1, future waterside construction activities that comply with existing regulatory requirements and successfully complete the CWA Section 404 Federal process, which includes obtaining a water quality certification under CWA Section 401 and implementing common in-water construction BMPs, would reduce any potential water quality impacts of in-water construction to less than significant.

Future projects that may be constructed would potentially disturb contaminated sediments, which could be released back into the water column and spread contaminants beyond their existing locations. This would be considered a significant impact if not mitigated (**Impact-WQ-1**). Mitigation

measures are proposed to reduce the significance of **Impact-WQ-1** and include **MM-WQ-1**, which would require monitoring for turbidity and known constituents of concern during dredging activities that occur in areas with known or suspected sediment contamination, to verify the activities do not affect beneficial uses in San Diego Bay; **MM-WQ-2**, which is designed to minimize re-suspension, spillage, and misplaced sediment during construction activities; and **MM-WQ-3**, which would contain the resuspension of suspended sediments and prevent the dispersal of known constituents of concern outside the construction work area. Mitigation measure **MM-WQ-4** would require future project proponents to develop a Dredging Management Program that must include the development of: (A) a Dredging Operations Plan identifying the appropriate SOPs and sediment control BMPs to be implemented; (B) a Contingency Plan to prepare for equipment or operational failures; (C) Health and Safety Plan for Dredging Activities; and (D) a Communication Plan. Mitigation measure **MM-WQ-5** requires future project proponents to implement a (Waterside) Sediment Management Program that must contain: (A) a SAP per the USACE and EPA sampling protocol; (B) Contaminated Sediment Management Plan; (C) In-Water Activity Specific Procedures; and (D) Post-Construction Sampling and Analysis verification sampling. Mitigation measure **MM-WQ-6** requires future project proponents to propose and conduct additional dredging of the site if, after in-water construction activities and dredging are complete, site sampling shows exceedances of constituents of concern, and **MM-WQ-7** requires that removed creosote-treated piles be disposed of in a manner that precludes their further use. Despite the implementation of **MM-WQ-1** through **MM-WQ-7** and compliance with regulations, **Impact-WQ-1** would be significant and unavoidable because, while the District and the other applicable Federal and State agencies have concurrent jurisdiction, the District would not have final approval over in-water construction and dredging methods, and would not be able to ensure methods that could reduce the impact to less than significant levels would be implemented.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to the conflict or obstruction of a water quality control plan or sustainable groundwater management plan (**Impact-WQ-1**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with the new Waterfront Destination Park could include landside demolition, grading and excavation, and filling and compaction. While these activities have the potential to result in stormwater runoff and erosion, as well as the use of potential pollutants, construction of a Waterfront Destination Park under Option 1 would be conducted in compliance with the regulations described above, including the Construction General Permit, District's JRMP, and/or the Dewatering General Permit (if applicable), that would minimize the potential for erosion, sedimentation, runoff, or spills of pollutants during construction. Option 1

does not specifically include any in-water elements that could result in water quality impacts during in-water construction activities. Therefore, with compliance with regulations, construction under Option 1 would not result in any additional or more severe impacts related to the degradation of water quality than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to the conflict or obstruction of a water quality control plan or sustainable groundwater management plan (**Impact-WQ-1**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with the expanded Lane Field Setback Park could include landside demolition, grading and excavation, and filling and compaction. While these activities have the potential to result in stormwater runoff and erosion, as well as the use of potential pollutants, construction activities associated with Option 2 would be conducted in compliance with the regulations described above, including the Construction General Permit, District's JRMP, and/or the Dewatering General Permit (if applicable), that would minimize the potential for erosion, sedimentation, runoff, or spills of pollutants during construction. Option 2 does not specifically include any in-water elements that could result in water quality impacts during in-water construction activities. Therefore, with compliance with regulations, construction under Option 2 would not result in any additional or more severe impacts related to the degradation of water quality than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to the conflict or obstruction of a water quality control plan or sustainable groundwater management plan (**Impact-WQ-1**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with the new park space that could be developed under Option 3 could include landside demolition, grading and excavation, and filling and compaction. While these activities have the potential to result in stormwater runoff and erosion, as well as the use of potential pollutants that could impact water quality, construction activities associated with Option 3 would be conducted in compliance with the regulations described above, including the Construction General Permit, District's JRMP, and/or the Dewatering General Permit (if applicable), that would minimize the potential for erosion, sedimentation, runoff, or spills of pollutants during construction. Option 3 does not specifically include any in-water elements that could result in water quality impacts during in-water construction activities. Therefore, with compliance with regulations, construction under Option 3 would not result in any additional or more severe impacts related the degradation of water quality than buildout of the proposed PMPU without Option 3.

Waterside Operation

Impacts from Increased Commercial and Recreational Vessel Activity

As also discussed under Threshold 1, operation of future development activities would have the potential to conflict with the San Diego Basin Plan. As noted under Threshold 1, prior to mitigation the increase in the number of slips would result in an increase in the number of recreational and commercial marine vessels in PD2, PD3, PD9, and PD10, which are already impaired by copper from the antifoulant paint used on vessel hulls to minimize biofouling. An increase in the number of vessels would potentially lead to additional contributions to the current copper impairments, which would be considered a significant impact (**Impact-WQ-2**). Implementation of **MM-WQ-8** would require project proponents to implement a Marina Best Management Practice Plan and copper reduction measures that would reduce pollutant load runoff and reduce inputs of copper from boat berthing, and would require ongoing monitoring of water quality to ensure that marina operations do not equal or exceed the Basin Plan water quality objectives. Should water quality objectives be worsened by the additional vessels (i.e., net new), additional BMPs would be required. With implementation of **MM-WQ-8**, impacts from copper leaching would be lessened; however, the net increase in the number of vessels with copper-based paints used on their hulls would result in a significant and unavoidable impact (**Impact-WQ-2**).

Impacts from Waterside Industrial Uses

Potential waterside industrial activities would continue to occur under the PMPU, and future waterside industrial activities may be proposed through 2050. As discussed under Threshold 1, SIC-coded industrial uses are subject to regulation by the San Diego RWQCB through the Industrial General Permit, individual NPDES permits, or WDRs, and must include BMPs to prevent pollutants from entering stormwater discharges and runoff into the Bay. Any addition of waterside industrial activities would be subject to regulatory oversight and would need to comply with applicable regulations and all associated BMPs pertaining to marine-related industrial activities and services, including, but not limited to, the District's JRMP and Stormwater Ordinance, and the Industrial General Permit and WDRs.

Impacts from Waterside Aquaculture Activities

As discussed under Threshold 1, depending on the type of aquaculture operations proposed, the primary potential causes of water quality degradation include turbidity caused during harvesting and other similar operations, as well as biological oxygen demand. Mitigation measure **MM-WQ-9** would minimize impacts by requiring future aquaculture projects that may result in significant impacts to: (1) conduct a siting study to predict potential water quality impacts due to physical factors such as reduced flushing as well as any potential operational impacts, (2) develop an aquaculture water quality monitoring plan consistent with the requirements of the Shellfish Aquaculture Mitigation Plan, and (3) develop site-specific BMPs to be implemented during operation of the aquaculture facility to lessen or eliminate potential water quality impacts. With implementation of **MM-WQ-9**, impacts would be less than significant.

Landside Construction and Operation

As discussed under Threshold 1, the construction and operation of future development under the proposed PMPU would not result in any significant landside conflicts with the San Diego Basin Plan due to mandatory compliance with existing laws, regulations, and District programs (e.g.,

Construction General Permit, District's JRMP requirements, Dewatering Permit, Stormwater Management and Discharge Control Ordinance [Article 10], General Industrial Permit). Consequently, impacts from future landside construction and operation activities related to conflicting with or obstructing implementation of a water quality control plan would be less than significant.

Conflict with or Obstruct Implementation of a Sustainable Groundwater Management Plan

The Sustainable Groundwater Management Act was enacted to better manage groundwater supplies in the state and directs local agencies (e.g., cities, counties, and water agencies) to adopt Groundwater Sustainability Plans for high- and medium-priority groundwater basins to ensure their long-term sustainability. The proposed PMPU area is within two DWR-designated groundwater basins: the Mission Valley Groundwater Basin (very low priority) and the Coastal Plain of San Diego Groundwater Basin (low priority) (County of Water Authority 2021). Planning District 2 and a portion of PD3 are within the Mission Valley Groundwater Basin, while the remaining portion of PD3 as well as PD4, PD7, and PD8 are within the Coastal Plain of San Diego Groundwater Basin. Planning District 9 and PD10 are not within a recognized groundwater basin designated by DWR or in the San Diego Basin Plan. As such, the proposed PMPU area is not within a high- or medium-priority groundwater basin that is subject to a Groundwater Sustainability Plan, and there is no Groundwater Sustainability Plan or other groundwater management plan applicable to the proposed PMPU. Further, because groundwater is mainly seawater infiltrating the soils under the planning districts, groundwater recharge would not be reduced by the proposed PMPU. Moreover, the proposed PMPU does not include any uses that would directly draw groundwater within the proposed PMPU area (e.g., groundwater wells). In the event temporary groundwater dewatering is required during construction of future development, dewatering would comply with San Diego RWQCB permits and requirements (i.e., Order No. R9-2015-0013 and R9-2019-0005). As a result, there would be no impact on groundwater resources from construction activities. Therefore, the proposed PMPU would not conflict with or obstruct implementation of a sustainable groundwater management plan, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impacts related to water quality due to the future operation of marinas (**Impact-WQ-2**) and aquaculture facilities (**Impact-WQ-3**). These significant impacts would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operation of the new Waterfront Destination Park under Option 1 would be similar to that of other recreational uses within the proposed PMPU area, which generally are not anticipated to generate pollutants that could impair water quality. In addition, operation of a new Waterfront

Destination Park under Option 1 would comply with Article 10 and the District's JRMP, which would minimize impacts from stormwater discharge by requiring the implementation of permanent BMPs. Therefore, operations under Option 1 would not result in any additional or more severe impacts related to degradation of water quality or violation of water quality standards or waste discharge requirements than the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impacts related to water quality due to the future operation of marinas (**Impact-WQ-2**) and aquaculture facilities (**Impact-WQ-3**). These significant impacts would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operation of the expanded Lane Field Setback Park under Option 2 would be similar to that of other recreational uses within the proposed PMPU area, which generally are not anticipated to generate pollutants that could impair water quality. In addition, operation of new park space under Option 2 would comply with Article 10 and the District's JRMP, which would minimize impacts from stormwater discharge by requiring the implementation of permanent BMPs. Therefore, operations under Option 2 would not result in any additional or more severe impacts related to degradation of water quality or violation of water quality standards or waste discharge requirements than the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant impacts related to water quality due to the future operation of marinas (**Impact-WQ-2**) and aquaculture facilities (**Impact-WQ-3**). These significant impacts would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operation of new park space that could be developed under Option 3 would be similar to that of other recreational uses within the proposed PMPU area, which generally are not anticipated to generate pollutants that could impair water quality. In addition, operation of new park space under Option 3 would comply with Article 10 and the District's JRMP, which would minimize impacts from stormwater discharge by requiring the implementation of permanent BMPs. Therefore, operations under Option 3 would not result in any additional or more severe impacts related to degradation of water quality or violation of water quality standards or waste discharge requirements than the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan. Rather, the proposed PMPU policies listed in Section 4.8.4.3 would reduce potential impacts related to compliance with a water quality control plan by prioritizing the protection and enhancement of water quality (ECO Policy 2.1.1), committing to implementing initiatives to reduce copper loads from recreational vessels (ECO Policy 2.1.6) and encourage the use of alternative non-copper based antifouling paints (ECO Policy 2.1.7), committing to prioritizing and pursuing opportunities for the protection and enhancement of sediment quality (ECO Policy 2.2.1),

reinforcing compliance with the MS4 permits and other legal requirements to minimize pollution impacts (ECO Policy 2.3.1), implementing measures to prevent pollution impacts and adverse impacts from runoff flows from all development and maintenance activities (ECO Policy 2.3.4), and implementing measures to protect and improve water quality from development projects located in areas identified as impaired under Section 303(d) of the CWA (ECO Policy 2.3.5). As stated above, the proposed PMPU area is not within a high- or medium-priority groundwater basin that is subject to a Groundwater Sustainability Plan, and there is no Groundwater Sustainability Plan or other groundwater management plan applicable to the proposed PMPU.

Impact Determination and Mitigation

Implementation of the proposed PMPU would conflict with or obstruct implementation of a water quality control plan. No impacts would occur in regard to conflicts with a sustainable groundwater management plan.

Significant Impacts

Impact-WQ-1: Disturbance of Contaminated Sediment During Construction, as listed under Threshold 1.

Impact-WQ-2: Contribution to Water Quality Impairments from Future Marina Operations, as listed under Threshold 1.

Impact-WQ-3: Water Quality Degradation from Aquaculture Operations, as listed under Threshold 1.

Mitigation Measures

For **Impact-WQ-1**:

MM-WQ-1: Monitor Turbidity and Constituents of Concern During Construction-Related Sediment Disturbance, as listed under Threshold 1.

MM-WQ-2: Implement Best Management Practices During Construction-Related Sediment Disturbance, as listed under Threshold 1.

MM-WQ-3: Apply Silt Curtains During Construction-Related Sediment Disturbance with Contaminants of Concern, as listed under Threshold 1.

MM-WQ-4: Implement a Dredging Management Program, as listed under Threshold 1.

MM-WQ-5: Implement a Sediment Management Program, as listed under Threshold 1.

MM-WQ-6: Implement Post-Dredging Remediation, as listed under Threshold 1.

MM-WQ-7: Remove and Dispose of Creosote Piles Properly, as listed under Threshold 1.

For **Impact-WQ-2**:

MM-WQ-8: Prepare and Implement a Marina Best Management Practice Plan and Copper Reduction Measures, as listed under Threshold 1.

For **Impact-WQ-3**:

MM-WQ-9: Conduct Water Quality Monitoring of Aquaculture Operations, as listed under Threshold 1.

Level of Significance After Mitigation

In order to address both the possibility of contaminated sediment disturbance and its release into the water column (**Impact-WQ-1**), during construction the project proponent would monitor turbidity and constituents of concern to verify that dredging activities do not unreasonably affect beneficial uses in San Diego Bay. As required by **MM-WQ-1**, if water quality objectives are violated, the project proponent would temporarily halt activity and implement all additional measures necessary to protect water quality per CWA Section 401 and 404 permits. To assist with avoiding exceeding Basin Plan or project-specific water quality objectives, future projects would employ standard BMPs during in-water construction to minimize resuspension, spillage, and misplaced sediment (**MM-WQ-2**). One particular BMP that must be used for activities that would lead to substantial sediment disturbance for areas of known COC is the use of silt curtains (**MM-WQ-3**). Silt curtains would be used to contain the resuspension of sediment and prevent the associated dispersal of constituents of concern outside the construction work area. Mitigation measure **MM-WQ-4** would require future project proponents to develop and implement a Dredging Management Program per EPA and USACE requirements to complete dredging operations safely, in an efficient manner, while minimizing the resuspension of contaminated sediments in the Bay (i.e., resuspension of contaminated sediments do not significantly exceed turbidity measurements taken in a designated reference location nearby, but outside of the project area), and ensuring the proper disposal of any contaminated sediments in an approved disposal facility using best management practices. Mitigation measure **MM-WQ-5** requires future project proponents to implement a (Waterside) Sediment Management Program, and **MM-WQ-6** requires future project proponents to propose and conduct additional dredging of the site if, after in-water construction activities and dredging are complete, sediment quality confirmation sampling shows exceedances of constituents of concern. Lastly, **MM-WQ-7** requires that removed creosote-treated piles be disposed of in a manner that precludes their further use in compliance with local regulations. Implementation of **MM-WQ-1** through **MM-WQ-7** would minimize potential water quality impacts associated with sediment contamination (**Impact-WQ-1**). The District's approval of in-water construction projects is conditional on the project proponent obtaining the necessary permits for construction from the USACE, RWQCB, and/or other Federal and State agencies. By obtaining permits to conduct in-water construction and implementing **MM-WQ-1** through **MM-WQ-7**, potential significant impacts would be reduced.

To address the potential for future development or redevelopment of marinas to contribute to, and potentially worsen, existing copper impairments (**Impact-WQ-2**), project proponents would be required to develop a Marina Best Management Practice Plan to reduce inputs of total and dissolved copper resulting from increased vessel activity within the marinas (**MM-WQ-8**). With implementation of **MM-WQ-8**, impacts from copper leaching would be lessened, but the net increase in the number of vessels with copper-based paints used on their hulls would result in a significant and unavoidable impact (**Impact-WQ-2**).

To address the potential impacts on water quality from aquaculture (**Impact-WQ-3**), **MM-WQ-9** requires future aquaculture projects which may have significant impacts to (1) conduct a siting study to predict potential water quality impacts due to physical factors such as reduced flushing as well as any potential operational impacts, (2) develop an aquaculture water quality monitoring plan consistent with the requirements of the Shellfish Aquaculture Mitigation Plan, and (3) develop site-

specific BMPs to be implemented during operation of the aquaculture facility to lessen or eliminate potential water quality impacts. With implementation of **MM-WQ-9**, impacts would be less than significant. Because any exceedances from aquaculture operations would be rectified with implementation of **MM-WQ-9**, **Impact-WQ-3** would be reduced to less than significant.

4.8.5 Cumulative Impact Analysis

A significant cumulative impact on hydrology and water quality would occur if the proposed PMPU were to make a cumulatively considerable contribution to impacts related to water quality standard violations; depletion of groundwater supplies or interference with recharge, alterations to drainage patterns leading to erosion or flooding, increased runoff in excess of available capacity, substantial additional sources of polluted runoff, the placement of structures within a 100-year flood hazard area that would impede or redirect flood flows, and/or exposure of people or structures to flooding risk from inundations by seiche or tsunami. These issues are evaluated within the context of past, present, and probable future projects. The proposed PMPU is not anticipated to result in impacts related to depletion of groundwater supplies or interference with recharge; alterations to drainage patterns leading to erosion or flooding; placement of structures within a 100-year flood hazard area; and/or the exposure of people or structures to flooding risk from inundations by dam and/or levee failure, seiche, or tsunami. As such, cumulative impacts related to these issues are not required to be evaluated.

4.8.5.1 Geographic Scope

The geographic scope for cumulative impacts associated with hydrology and water quality includes the receiving waters of San Diego Bay, which includes a number of the plans and programs listed in Table 2-2 in Chapter 2, *Environmental Setting*. Given the proposed PMPU area is located on the downstream end of the watershed, the proposed PMPU's cumulative contributions would be limited to the Bay waters.

4.8.5.2 Cumulative Effects From Past, Present, and Probable Future Projects

Table 2-2 includes past, present, and probable future plans and programs in the vicinity of the proposed PMPU area. Three plans and programs, the National City Bayfront Projects and Plan Amendments, the Chula Vista Bayfront Master Plan, and the Seaport San Diego project are located within the District's jurisdiction and are within 0.25 mile of the proposed PMPU area. The other plans and programs in Table 2-2 are either approved or in preparation in adjacent jurisdictions. Features of several of these plans and programs may be within the same watershed as the proposed PMPU area. Many of the plans and programs listed in Table 2-2 are located on the landside portion of the Bay and would not involve in-water construction activities. The projects that would involve at least 1 acre of grading during construction would be required to comply with the NPDES Construction General Permit, which requires preparation of a SWPPP by a Qualified SWPPP Developer and implementation of BMPs by a Qualified SWPPP Practitioner to ensure runoff from individual projects meet current water quality standards. For projects under 1 acre, the Municipal Permit requires minimum BMPs at all construction and grading projects. The implementation of BMPs for all construction sites is required to ensure a reduction of potential pollutants from the

project sites to the maximum extent practicable and to effectively prohibit non-stormwater discharges from construction sites to the Municipal Separate Storm Sewer System or directly to the Bay. Furthermore, many of these cumulative projects would replace existing development that was not constructed to modern MS4 permit requirements. Consequently, new cumulative development would be required to comply with all applicable laws and regulations and thus may improve baseline environmental conditions by increasing onsite water retention and reducing offsite stormwater flows in comparison to baseline conditions. Therefore, for the reasons discussed above, cumulative effects from past, present, and probable future plans and programs on landside water quality and hydrology would not be significant.

Past projects have contributed pollutants to San Diego Bay, as evidenced by the CWA Section 303(d) List of Water Quality Limited Segments Requiring Total Maximum Daily Loads. The entire San Diego Bay is a listed impaired water body for PCBs, PAHs, and mercury. Portions of the Bay shoreline are listed as impaired for benthic community effects, sediment toxicity, heavy metals, PAHs, and PCBs. This is primarily due to historic uses of the Bay and the surrounding area, as well as current uses. Current and probable future projects associated with cumulative plans and programs in Table 2-2 may involve activities that could worsen existing impacts on the water quality of the Bay, including disturbing contaminated sediment that is released into the water column. Current and probable future projects could also contribute pollutants such as oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens into the stormwater conveyance system and receiving waters.

Past projects have resulted in increases in impervious surfaces that reduce infiltration and affect recharge of the groundwater basin; however, past, present, and probable future projects in the proposed PMPU area and the surrounding vicinity would be located in areas where groundwater is mainly seawater infiltrating the soils and is brackish water that is not extracted for municipal purposes.

Past projects have also resulted in the construction of buildings, infrastructure, or other features that resulted in permanent changes in drainage patterns that could result in erosion, siltation, increased stormwater runoff, and increased stormwater pollutants, or exceed drainage system capacity or impede flood flows. Present and probable future projects have the potential to result in construction that could contribute to a change in drainage patterns. However, past, present, and probable future projects would be constructed in compliance with the Construction General Permit, the requirements of a project-specific SWPPP, the District's Article 10 and JRMP (if within the District's jurisdiction), Dewatering General Permit (if applicable), and other applicable regulations which minimize erosion and the increase of stormwater runoff.

Past, present, and probable future projects could be located within tsunami hazard zones or flood zones, which could result in the release of pollutants due to project inundation. However, projects would comply with the requirements of applicable laws and regulations that regulate the use, storage, and handling of potential pollutants, including the Construction General Permit, NPDES Permit, Industrial General Permit, the local CUPA (County DEH) regulations, DOT Hazardous Materials Regulations, DTSC regulations, USCG regulations, and Caltrans regulations.

Present and probable future projects would be subject to Clean Water Act regulations that require compliance with water quality standards, water quality control plans, or sustainable groundwater management plans, including State and local water quality regulations, District's JRMP, local *BMP Design Manual* (for projects within the District's jurisdiction), the Basin Plan, and any applicable

stormwater ordinances of the adjacent cities, which identify water quality BMP requirements (for projects within adjacent city jurisdiction). In addition, projects affecting waters of the United States would also need to comply with CWA Section 404 and 401 regulations, requiring implementation of additional BMPs to protect water quality during construction. However, because San Diego Bay is currently an impaired water body and has been for some time, the cumulative effects of past, present, and probable future projects on water quality are significant.

4.8.5.3 Project Contribution

A cumulatively significant hydrology and water quality impact presently exists because of San Diego Bay's status as an impaired water body and the potential for present and probable future projects to further degrade water quality with the addition of similar pollutants as those already impairing the Bay.

Future development under the proposed PMPU would involve land-disturbing activities that would expose soils. Construction of projects proposed under the PMPU may result in short-term dewatering during construction of the foundations for developments such as hotels, restaurants, mobility hubs, and related project elements. Future development projects proposed under the PMPU would be required to comply with dewatering requirements imposed by the San Diego RWQCB general waste discharge requirements for discharges from temporary groundwater extraction and similar waste discharges to San Diego Bay (Order No. R9-2015-0013 and R9-2019-0005). This development would also be required to comply with the Construction General Permit if it would disturb more than 1 acre of land during construction. The Construction General Permit would require development and implementation of a SWPPP by a Qualified SWPPP Developer. The SWPPP would identify what construction BMPs would be implemented in order to protect stormwater runoff and include a monitoring plan for measuring BMP effectiveness. In addition, future development within the proposed PMPU area would be required to comply with the Municipal Stormwater Permit and the District's JRMP, which identifies construction BMPs that would be implemented in order to protect stormwater runoff. The District's JRMP requires preparation of a Construction BMP Plan for projects that would disturb less than 1 acre, but more than 100 square feet. Construction BMPs, identified in the Construction BMP Plan, would be required to be implemented throughout the various construction phases to protect water quality and would reduce impacts on water quality during future construction activities. Pursuant to the District's JRMP, post-construction BMPs are required for all projects falling under the Municipal Stormwater Permit. Post-construction BMPs are a subset of BMPs that include structural and nonstructural controls that detain, retain, and filter (i.e., treat) stormwater, and also include education on proper stormwater practices to prevent the release of pollutants to surface waters during operation. District Code Article 10 (Stormwater Management and Discharge Ordinance) also specifically requires pollutant control BMPs for all PDPs. Additionally, future project proponents would be required to prepare a project-specific SWQMP for approval by the District that identifies low-impact development (LID) features (site design and source control BMPs) and pollutant control BMPs to reduce the discharge of pollutants to the maximum extent practicable. Therefore, future development would be required to implement BMPs consistent with the Construction General Permit (as applicable), the District's JRMP, the *BMP Design Manual*, District Code Article 10, and the SWQMP to ensure that water quality standards or wastewater discharge requirements are not violated and impacts on water quality would be less than significant during construction and operation. Consequently, construction and operation of future landside development in the proposed PMPU would not result in a cumulatively

considerable contribution to the significant cumulative impact related to the violation of water quality standards and wastewater discharge requirements.

Implementation of the proposed PMPU would potentially result in impervious surfaces that reduce groundwater recharge; however, because groundwater in the proposed PMPU area is fed by the infiltration of seawater, and the proposed PMPU would not extract groundwater for municipal uses, the PMPU would not have an effect on groundwater levels. Thus, future development under the proposed PMPU would not decrease groundwater supplies or interfere substantially with groundwater recharge, or conflict with sustainable groundwater management plans. The proposed PMPU's contribution to decreased groundwater supply would not be cumulatively considerable.

Additionally, any open excavation occurring associated with utilities or soil removal for foundation preparation may serve to capture stormwater and impede its flow if unprotected; however, BMPs would be in place to divert runoff away from the construction site and toward proper drainage locations. As a result, future development under the proposed PMPU would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The proposed PMPU's contribution to polluted runoff would not be cumulatively considerable.

Similar to existing conditions, some future development on the landside portion of the proposed PMPU area could be within the FEMA 100-year floodplain. During future construction activities, construction equipment would be mobile and could move to higher ground if needed. Thus, the temporary presence of the construction-related equipment would not represent a permanent change to the floodplain, and would not impede or redirect flood flows. All future structures proposed within Flood Zone AE must be designed to ensure that the floor elevation is raised at least 1 foot above the floodplain elevation and meets the structural requirements of FEMA to avoid any damage to persons or structures as a result of a 100-year flood. In addition, the storage, use, and disposal of hazardous materials during operation of probable future development would be regulated by the applicable oversight agencies and regulations, including the local CUPA (County DEH), DOT Hazardous Materials Regulations, DTSC, USCG, San Diego RWQCB, California Highway Patrol, and Caltrans. Therefore, because the construction and operation of future development under the proposed PMPU would not exacerbate the flooding potential or the effects of flooding on the existing environment, including the risk of release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones, impacts would be less than significant. The proposed PMPU's incremental contribution to this issue would not be cumulatively considerable.

In-water construction activities could result in short-term water quality impacts associated with the removal and replacement of existing pilings (including piles treated with wood preservatives such as creosote) and piers, construction of new pilings/piers, moorings, and floating docks, aquaculture infrastructure such as buoys and grow out lines, and dredging activities. Placement of pile structures could temporarily affect water quality in the absence of regulations. Pile placement would result in the short-term disturbance of localized sediments. The disruption of sediments from these activities could adversely affect water quality by temporarily resuspending sediments and increasing turbidity. In addition, chemicals or contaminants that are present in the sediments could be released into the water column during resuspension, which could temporarily degrade water quality. Further, suspended sediments in the water column can lower levels of dissolved oxygen, increase salinity, increase concentrations of suspended solids, and possibly release chemicals present in sediments into the water and redeposit them at various locations on the Bay floor, making them potentially bioavailable for marine organisms now that they would no longer be buried. The

disturbance of potentially contaminated sediments that would become suspended in the water column, resulting in the release of hazardous pollutants and degradation of water quality would be considered a cumulatively considerable impact related to the violation of water quality standards and conflict with the San Diego Basin Plan (**Impact-C-WQ-1**).

Future development under the proposed PMPU involving in-water work would be required to obtain a CWA Section 404 and potentially a Rivers and Harbors Act Section 10 permit (for the placement of any structures in navigable waters) from the USACE, and a corresponding CWA Section 401 Water Quality Certification from the RWQCB. These permits would require the implementation of construction BMPs that would minimize the discharge of materials; control debris; provide spill containment and cleanup equipment; minimize resuspension, spillage, and displaced sediment during dredging operations; contain suspended sediments with silt curtains; monitor water quality; and otherwise reduce impacts on water quality.

In addition to the required regulatory permits, **MM-WQ-7** would minimize potential impacts associated with sediment contamination during in-water construction activities, including dredging and pile installation/removal located within areas with contaminated sediment. Implementation of **MM-WQ-1** through **MM-WQ-7** would reduce the potential cumulatively considerable impact on water quality due to the suspension of contaminated sediments in the water column (**Impact-C-WQ-1**), but not to less than significant. Because the District and applicable Federal and State agencies have concurrent jurisdiction over the approval of methods for in-water construction, the District would not have sole or final authority to determine the type of in-water construction methods required, and thus could not guarantee the mitigation measures would reduce the impact to less than significant. Thus, the proposed PMPU would result in a cumulatively considerable and unavoidable contribution to the significant cumulative impact after mitigation.

Implementation of the proposed PMPU would have the potential to result in additional vessels in PD2, PD3, PD9, and PD10 through the introduction of additional slips and an increase in cruise ships calls at the Broadway and B Street piers over the life of the plan. It is reasonably foreseeable that the net increase in the number of vessels using antifoulant copper-based paint for vessel hulls would potentially worsen the existing condition and result in a cumulatively considerable contribution to the existing copper impairments (**Impact-C-WQ-2**). Implementation of **MM-WQ-8** requires development and implementation of a Marina Best Management Practice Plan and copper reduction measures. The Marina Best Management Practice Plan would identify specific use restrictions, provide copper education and outreach to the marina occupants, and include measures that would reduce pollutant load runoff, reduce inputs of copper from boat berthing, and require ongoing monitoring of water quality to ensure that marina operations do not equal or exceed the Basin Plan water quality objectives. Implementation of **MM-WQ-8** would reduce the potential cumulatively considerable impact on water quality associated with worsening existing copper impairments (**Impact-C-WQ-2**), but not to less than significant; thus, the proposed PMPU would result in a cumulatively considerable and unavoidable contribution to the significant cumulative impact after mitigation.

Moreover, the proposed PMPU would allow for the development of aquaculture facilities. Depending on the type of aquaculture operation, the primary potential causes of water quality degradation include turbidity caused during harvesting and other similar operations, as well as biological oxygen demand. Due to the existing water quality impairments in the Bay, the operation of certain aquaculture facilities could result in a cumulatively considerable contribution to water quality impacts depending on the type of aquaculture and the methods used (**Impact-C-WQ-3**).

Implementation of **MM-WQ-9** requires future aquaculture projects to develop an aquaculture water quality monitoring plan, and implementation of BMPs—including implementation of water quality monitoring before, during, and after aquaculture operations. Mitigation measure **MM-WQ-9** would reduce the potential cumulatively considerable impact on water quality associated with operation of aquaculture operations (**Impact-C-WQ-3**) to less than significant; thus, the proposed PMPU would not result in a cumulatively considerable contribution to the significant cumulative impact after mitigation.

4.8.5.4 Cumulative Impact Determination and Mitigation

The proposed PMPU's incremental contribution to cumulative hydrology and water quality impacts related to the violation of water quality standards and the conflict with the Basin Plan (**Impact-C-WQ-1** and **Impact-C-WQ-2**) would be cumulatively considerable following the implementation of **MM-WQ-1** through **MM-WQ-8**. With **MM-WQ-9** incorporated, **Impact-C-WQ-3** would not be cumulatively considerable.

4.9.1 Overview

Land use and planning issues refer to the proposed Port Master Plan Update's (PMPU's) compatibility with surrounding water and land uses and its consistency with applicable land use plans and policies that have regulatory jurisdiction over the PMPU area. This section describes the existing water and land uses that could be adversely affected by the proposed PMPU; outlines the laws and regulations related to water and land use and planning; and discusses any conflicts with applicable plans, policies, and regulations, such as the San Diego Unified Port District Act (Port Act), the Public Trust Doctrine, and California Coastal Act (CCA), including Chapter 3 and 8 policies. A discussion of the California Coastal Commission's (CCC's) Sea Level Rise Policy Guidance is included in Section 4.13, *Sea Level Rise*.

Impacts related to water and land use are considered significant if the proposed PMPU would: (1) physically divide an established community; or (2) cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

As discussed in Section 4.9.4.4, *Project Impacts and Mitigation Measures*, the proposed PMPU would not result in significant impacts related to land use and planning.

4.9.2 Existing Conditions

The proposed PMPU area comprises the majority of the District's jurisdiction, including approximately 1,636.89 acres of water and 1,014.18 acres of land¹ in and around San Diego Bay (the Bay) and along the Imperial Beach oceanfront. The proposed PMPU area supports a diverse range of water and land uses, including commercial, industrial, and recreational uses, some of which are water-dependent uses. Based on the Port Act, residential uses are not allowed within the Port District; therefore, none are proposed within the proposed PMPU area. The existing land uses for each planning district (PD) are described below (see Figures 2-2 through 2-9 in Chapter 2, *Environmental Setting*).

4.9.2.1 Planning District 1: Shelter Island

Planning District 1 is located on the southeastern side of the Point Loma Peninsula, at the entrance to the Bay, near upland communities, military installations, and the Cabrillo National Monument. The island segment of Shelter Island is a narrow strip of land, approximately 1 mile in length and less than 0.1 mile in width, that extends off the Point Loma peninsula via Shelter Island Drive. West Shelter Island wraps around the Shelter Island Yacht Basin, and includes a diverse mix of water-oriented development and activities, including marinas, yacht clubs, transient docking, resort hotels, restaurants, and boatyards. Recreational areas include Shelter Island Shoreline Park, the Yokohama

¹This excludes approximately 670 acres of land that is currently leased to the San Diego International Airport.

Friendship Bell, Shelter Island Pier, Shelter Island Boat Launch, La Playa Trail, La Playa Piers, and Kellogg Beach. East Shelter Island wraps around America's Cup Harbor and includes coastal-dependent marine services and fishing industries that provide for long-term economic viability and growth in the region. The predominant uses in this area consist of commercial recreation, marine sales and services, commercial fishing, and sportfishing. Development adjacent to PD1 includes single-family and multi-family residences, as well as restaurants and boutique retail shops.

4.9.2.2 Planning District 2: Harbor Island

With nearly 5 miles of waterfront, PD2 offers views of the Bay from the shoreline parks, shoreline path and play areas, and restaurants located on the water's edge of the western and eastern tips of Harbor Island. The island segment of PD2 primarily includes hotels, restaurants, and marinas that are located on the basin side of Harbor Island. Additionally, a portion of east Harbor Island includes surface parking lots, former off-airport rental car facilities, and the San Diego Harbor Police facility. Located east of Harbor Island is the U.S. Coast Guard Station San Diego with San Diego International Airport to the north. West of Harbor Island lies the U.S. Naval Training Center, and the residential neighborhood of Point Loma.

Spanish Landing Park, is a linear park located along the western basin of Harbor Island and adjacent to Harbor Drive. Existing amenities at Spanish Landing Park include pedestrian and bicycle paths, public art, a play structure, and a beach area. Additionally, this planning district includes the District Administration Building, former rental car services and off-airport parking, and surface parking lots associated with industrial maritime businesses along Pacific Highway.

4.9.2.3 Planning District 3: Embarcadero

Planning District 3 spans the length of the bayfront within the Downtown San Diego area, beginning at Laurel Street to the north (just south of San Diego International Airport) and ending roughly at Park Boulevard, which is south of the San Diego Convention Center and north of Tenth Avenue Marine Terminal (TAMT). Harbor Drive, which runs the length of this planning district, provides vehicular access and on-street parking to development along the Embarcadero. The Embarcadero Planning District consists of three subdistricts in the existing PMP: North Embarcadero, Central Embarcadero, and South Embarcadero. A description of the physical conditions within each of these subdistricts is provided below.

The North Embarcadero Subdistrict runs north to south and spans the Downtown bayfront from Laurel Street to the north to just before North Harbor Drive to the south (where it turns east, just north of Ruocco Park and Seaport Village). North Embarcadero provides a diverse waterside experience including water-based transit vessel berthing and commercial fishing activities at the Grape Street Piers, recreational vessel berthing and anchorage locations, and cultural facilities in the form of the Maritime Museum and USS Midway Museum. Cruise ship operations are located within North Embarcadero with facilities on B Street Pier and Broadway Pier connecting visitors to Tidelands and Downtown San Diego. A waterside promenade providing continuous waterside access extends along the entire North Embarcadero with public art features and plaza areas for visitors. A mix of visitor-serving commercial and recreational activities including hotels and restaurants are also located within the North Embarcadero. The U.S. Navy's Commander, Naval Base San Diego, and Naval Supply Center also occupy large areas on the eastern side of North Harbor Drive, adjacent to the North Embarcadero. The San Diego County Administration Building, Little Italy, and the central business district of Downtown San Diego are east of the North Embarcadero. Development adjacent

to the planning district is typical of a downtown and includes a mix of high-density residential dwellings, high- and medium-rise office buildings, restaurants, and retail establishments.

The Central Embarcadero provides a mix of recreational, visitor-serving commercial, and commercial fishing uses. Waterfront open spaces, such as Tuna Harbor Park, Ruocco Park, and Embarcadero Marina Park North, provide recreational opportunities and views of the water. Tuna Harbor Basin, home to San Diego's well-established historic commercial fishing industry, allows visitors to see activities such as net mending and fish offloading firsthand, as well as visit the commercial fishermen's Dockside Market. Old Police Headquarters, together with Seaport Village's small-scale commercial development located along the waterfront, provides visitors with a mix of restaurants and specialty retail. Downtown San Diego and the Gaslamp Quarter are east of the Central Embarcadero, which are dominated by dense urban development of mainly high- and medium-rise hotel, residential, and office buildings, along with restaurant and retail buildings.

The South Embarcadero is bounded to the north by Seaport Village and to the south by the TAMT. Development within the South Embarcadero area includes hotels, restaurants, the San Diego Convention Center, and public parks, including Embarcadero Marina Park South where a permanent performance venue is located. Marinas occupy the inlet created by the two L-shaped segments that form Embarcadero Marina Parks North and South. The South Embarcadero is adjacent to the Gaslamp Quarter of the City of San Diego, which includes high- and medium-rise residential buildings, medium-rise office buildings, Petco Park stadium, and numerous tourist-oriented facilities, such as hostels and hotels, restaurants, and boutique retail shops.

4.9.2.4 Planning District 4: Working Waterfront

Planning District 4 is composed predominantly of marine-related industrial facilities, including a strategic regional, State, and Federal port located on the TAMT, ship building facilities, and ship repair yards, as well as a waterfront park. This planning district contains a highly productive consolidation of marine terminal and maritime services and industrial land uses, facilitating maritime trade and providing large-scale coastal-dependent industrial activities with direct access to heavy rail service and deep-water berthing. The TAMT is located on a 96-acre parcel, which was formerly a landfill, and includes eight deep-water berths capable of accommodating four large ocean-going vessels. The TAMT is connected to the regional rail and roadway network, which provides critical connections and allows the transportation of cargo. Historically, the terminal has focused on the following cargo types: dry bulk, liquid bulk, refrigerated and nonrefrigerated containers, and multipurpose/break bulk. The area south of TAMT contains the BAE Systems San Diego Ship Repair Yard, the General Dynamics NAASCO shipbuilding and repair facility, a Chevron terminal, and other ship building facilities and ship repair yards, including marine-related engineering businesses. Nestled between the TAMT and the shipbuilding and ship repair facilities to the south, Cesar Chavez Park and the adjacent Cesar Chavez Pedestrian Pier provide valuable public access to the Bay and visitor-serving amenities. The community of Barrio Logan is located east/northeast of PD4. Barrio Logan includes single- and multi-family residential dwellings, as well as commercial and industrial development.

4.9.2.5 Planning District 7: South Bay

Planning District 7 encompasses the water and land area at the southern end of San Diego Bay. The area surrounding this planning district is composed of the Chula Vista Wildlife Reserve to the north, the San Diego Bay National Wildlife Refuge South San Diego Bay Unit managed by the United States

Fish and Wildlife Service to the south, and State Highway 75 to the west. In addition, PD7 includes a marshy habitat conservation area and a narrow inlet that extends between the salt evaporation ponds.

4.9.2.6 Planning District 8: Imperial Beach Oceanfront

Planning District 8 consists of a long, uninterrupted beach and the Imperial Beach Pier, an approximately 1,300-foot-long publicly accessible pier that includes a promenade and restaurant and provides public fishing opportunities. Adjacent to the beach is predominantly residential development, including single-family homes, condominium complexes, and multi-family apartment complexes, that are within the jurisdiction of the City of Imperial Beach.

4.9.2.7 Planning District 9: Silver Strand

Planning District 9 is located on the western side of San Diego Bay between the Bay and the Pacific Ocean, with Coronado located to the north and Imperial Beach to the south. Crown Cove is located in the northern portion of the planning district, which is adjacent to the Crown Cove Aquatic Center, offering recreational activities such as paddling, sailing, kayaking, surfing, and safe boating education. The Crown Cove Anchorage (A7) also provides transient docking and mooring for boaters. Continuing south onto Coronado Bay Road, Crown Isle includes visitor-serving commercial amenities, including a hotel and restaurants, as well as a recreational boat berthing marina. Piers and docks extend into the subdistrict from private residences located off Tidelands, connecting directly to the residences with no ability to provide public access due to physical constraints. Further, Grand Caribe Isle and South Cays include the small land mass east of the Coronado Cays that is connected to the Silver Strand by Grande Caribe Causeway. Additional piers and docks with no associated public access extend into the subdistrict from off Tidelands private residences. The northern portion of Grand Caribe Isle includes commercial recreation, marinas, and boat storage. The southern portion includes Grand Caribe Shoreline Park, which was created as a native plant garden and natural habitat restoration area. Development adjacent to PD9 includes single-family residences and park space.

4.9.2.8 Planning District 10: Coronado Bayfront

Planning District 10 is located along San Diego Bay on the southeastern side of the City of Coronado. Commercial development is concentrated toward the northern portion of the planning district, including the Ferry Landing Marketplace, which offers a number of restaurants and small boutique or visitor-serving retail. Additionally, the Coronado Ferry Landing offers public water-based transit to and from Downtown San Diego. Tidelands Park provides a variety of land-based recreational opportunities, including play fields, a public beach, and a skate park. Additionally, development along the southern portion of PD10 includes a marina, boat rental facilities, yacht clubs, hotels, and the Coronado Municipal Golf Course. North and west of the Coronado Bayfront, development includes Naval Air Station North Island, single- and multi-family residences, and commercial centers. South of the Coronado Bayfront the planning district includes high-rise condominiums, a community center and public parks, and the U.S. Naval Amphibious Base.

4.9.3 Laws, Regulations, Plans, and Policies

4.9.3.1 Federal

Coastal Zone Management Act of 1972

The U.S. Congress recognized the importance of meeting the challenge of continued growth in the coastal zone by passing the Coastal Zone Management Act in 1972. The act, administered by the National Oceanic and Atmospheric Administration (NOAA) Office of Ocean and Coastal Resource Management, provides for management of the nation's coastal resources and balances economic development with environmental conservation.

The Coastal Zone Management Act outlines two national programs. The National Coastal Zone Management Program includes 34 coastal programs that aim to balance competing water and land issues in the coastal zone. The National Estuarine Research Reserve System creates field laboratories that provide a greater understanding of estuaries and how humans affect them. The overall program objectives of the act are to “preserve, protect, develop, and, where possible, restore or enhance the resources of the nation's coastal zone.”

The Coastal Zone Management Act ensures that development projects in coastal areas are designed and sited in a manner that is consistent with coastal zone land uses, maximizes public health and safety, and ensures that biological resources (e.g., wetlands, estuaries, beaches, fish and wildlife and their habitat) within the coastal zone are protected. The enforceable policies of that document are found in Chapter 3 of the California Coastal Act of 1976 (as amended). The CCC enforces the Coastal Zone Management Act by certifying that a proposed project is consistent with the California Coastal Act.

National Wildlife Refuge System Administration Act of 1966

The National Wildlife Refuge System Administration Act of 1966 consolidated the various categories of lands, administered by the Secretary of the Interior through the U.S. Fish and Wildlife Service (USFWS), into a single National Wildlife Refuge System. The act establishes a unifying mission for the refuge system, a process for determining compatible uses of refuges, and a requirement for preparing comprehensive conservation plans. The act states, first and foremost, that the mission of the National Wildlife Refuge System is focused singularly on wildlife conservation. In addition, the act identifies six priority wildlife-dependent recreation uses, clarifies the secretary's authority to accept donations of money for land acquisition, and places restrictions on the transfer, exchange, or other disposal of lands within the refuge system (NOAA 2012).

San Diego Bay National Wildlife Refuge Final Comprehensive Conservation Plan and Environmental Impact Statement

The San Diego Bay National Wildlife Refuge is managed by USFWS as part of the National Wildlife Refuge System. A Comprehensive Conservation Plan is prepared pursuant to the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997. USFWS manages the Sweetwater Marsh and South San Diego Bay units of the San Diego Bay National Wildlife Refuge in accordance with the approved Comprehensive Conservation Plan. The Comprehensive Conservation Plan provides long-range guidance on refuge management through its vision, goals, objectives, and strategies. The Comprehensive Conservation

Plan also provides a basis for a long-term adaptive management process, including implementing, monitoring progress, evaluating and adjusting, and revising plans accordingly (USFWS 2006).

4.9.3.2 State

California Coastal Act

The CCA went into effect on January 1, 1977 and granted the CCC authority to review and approve plans and projects located within the coastal zone. Under the CCA, cities and counties are encouraged to prepare Local Coastal Programs that guide implementation of conservation, development, and regulatory policies required by the CCA within the local coastal zone. Within port districts, PMPs serve this same function under the CCA. The draft PMP is then submitted to the CCC for certification, which ensures that the plan complies with the CCA. Once the PMP is certified, the port district is then authorized to issue Coastal Development Permits (CDPs), as prescribed by the adopted PMP for coastal zone projects within its jurisdiction.

The District's currently adopted PMP was originally certified by the CCC on January 21, 1981. As an update to the current PMP, the proposed PMPU is analyzed below for its consistency with the CCA, specifically Chapters 3 and 8 of the CCA. Public Resources Code Sections 30200 through 30265.5 establish the policies of Chapter 3 of the CCA, which include coastal resources planning and management policies that establish the standards by which the adequacy of local coastal programs and the permissibility of proposed developments subject to the provisions of the CCA are determined. Public Resources Code Sections 30700 through 30721 establish the policies of Chapter 8, Ports, of the CCA, which governs the portions of the District located within the coastal zone, excluding any wetland, estuary, or existing recreation area. Chapter 8 specifies that applicable California ports, including the District, must prepare and adopt a port master plan and, subsequently, submit it to CCC for review and certification as to conformance with the CCA. After such certification by CCC, either in its entirety or in part, coastal development permit (CDP) or CCA exclusion authority for development occurring within the District's jurisdiction resides with the District. Furthermore, for portions of the District's jurisdiction delineated in this Plan, the Board of Port Commissioners (Board) is authorized to grant CDPs pursuant to Chapter 8 of the CCA, and the District staff is authorized to issue CCA exclusions consistent with the District's CDP Regulations (adopted July 1, 1980, by Resolution No. 80-193 and subsequent amendments). The granting of a CCA approval (i.e., CDP or CCA exclusion) ensures that the development is consistent with the adopted and certified Port Master Plan, as required by the CCA and detailed in the District's CDP Regulations.

There are four categories of development on Tidelands in the coastal zone: appealable, non-appealable, excluded, and emergency. The types of development listed in Section 30715 of Chapter 8 of the CCA are considered appealable development and are subject to Chapter 3 (titled "Coastal Resources Planning and Management Policies") of the CCA. For appealable development, a port master plan must include policies that ensure consistency with both Chapters 3 and 8 of the CCA. Appealable projects as defined in the CCA include, but are not limited to,

- Developments for the storage, transmission, and processing of liquefied natural gas and crude oil in such quantities as would have a significant impact upon the oil and gas supply of the state or nation or both the state and nation. A development which has a significant impact shall be defined in the master plans.

- Wastewater treatment facilities; except for those facilities which process wastewater discharged incidental to normal port activities or by vessels.
- Roads or highways not principally intended for internal circulation within port boundaries.
- Office and residential buildings not principally devoted to the administration of activities within the port; hotels, motels, and shopping facilities not principally devoted to the sale of commercial goods utilized for water-oriented purposes; commercial fishing facilities, and recreational small craft marina related facilities.
- Oil refineries.
- Petrochemical production plants.
- Dredging required for the maintenance of developments specified above.

For appealable development, the District Board issues an CDP, which may be appealed to CCC by the applicant, an interested party, or two CCC commissioners.

In addition, development located on wetlands, estuaries, or “existing recreation areas,” as delineated in the original 1975 Coastal Plan (Coastal Plan–delineated development), must also comply with Chapter 3 even if the proposed development is not the type listed in Section 30715 (see Section 1.3.1(A), Coastal Initiative - Proposition 20 (1971)². All other types of development that do not qualify for an exclusion from a CDP or an emergency CDP are non-appealable and need not seek approval of the CCC after certification of a port master plan. However, a port master plan must include policies that ensure that such developments are consistent with Chapter 8. All development and associated CCA approvals, whether appealable or non-appealable, must be consistent with the certified port master plan. Adjacent jurisdictions must, for informational purposes, incorporate the certified port master plan into their own local coastal programs.

The proposed PMPU will require certification from the CCC. Table 4.9-1 lists each policy from Chapters 3 and 8 of the CCA and analyzes the proposed PMPU’s consistency with these policies.

California Public Trust Doctrine

The Public Trust Doctrine is a common law doctrine that provides that public lands and waters are held by the State or its delegated trustee for the benefit of all of the people of California. All tidelands and submerged lands granted or ungranted, as well as navigable rivers, sloughs, etc., are covered under the Public Trust Doctrine. The Public Trust Doctrine, as overseen by California State Lands Commission (CSLC), restricts the types of water and land uses allowed on public lands, including within the District’s jurisdiction. The Public Trust Doctrine is an evolving doctrine, but generally

² In 1972, the State of California adopted a Coastal Initiative (Proposition 20) that established temporary regional coastal commissions and one statewide commission. These commissions were tasked with preparing a coastal plan with coastal policy and planning recommendations for the State. The Coastal Plan was certified in 1975, and many of these recommendations were brought forward into the Coastal Act, including the establishment of CCC. Part IV of the 1975 Coastal Plan provided specific policy recommendations to each region, with accompanying maps (refer to Figure 1.2 of the proposed PMPU, *San Diego Region Map from 1975 Coastal Plan*) that identify various landmarks and coastal resources. Chapter 8 (titled “Ports”) of the Coastal Act describes these maps as a resource for identifying wetland, estuary, and recreation areas in the coastal zone. The San Diego region map is still used in coastal development permitting today for the District because all development proposed in the identified wetlands, estuary, and recreation areas on Figure 1.2 of the proposed PMPU must comply with policies in Chapters 3 and 8 of the Coastal Act.

limits the uses of sovereign lands to waterborne commerce, navigation, fisheries, open space, water-oriented recreation, ecological habitat protection, or other recognized public trust purposes. While Public Trust uses originally focused upon navigation, commerce, and fisheries, Public Trust uses have been interpreted to include broad array of uses such as fishing, hunting, bathing, swimming, boating, anchoring, and general recreation. Trust lands may be devoted to purposes unrelated to the trust if such purposes are incidental to and accommodate trust uses.

Port Act

The Port Act (Appendix 1 of the California Harbor and Navigation Code) was adopted in 1962. Through the Port Act, the State of California delegated its authority to the District to own, manage and control certain tidelands and submerged waters. Specifically, the District was established for the development, operation, maintenance, control, regulation, and management of the tidelands and lands underlying the inland navigable waters of San Diego Bay. Under the Port Act, the District was granted broad police powers. The Port Act requires the District to exercise its land management authority and powers over (1) the tidelands and submerged lands granted to the District and (2) any other lands conveyed to or acquired by the District by any city or the County of San Diego or acquired by the District. The Port Act grants the District exclusive police power over property and development in its jurisdiction. Section 19 of the Port Act requires that the board “shall draft a master plan for harbor and port improvement and for the use of all of the tidelands and submerged lands which shall be conveyed to the district pursuant to the provisions of this act.”

In addition, Section 87, part (a), of the Port Act defines allowable uses that may occur on tidelands. These include harbors and all necessary structures or appliances necessary, or convenient, for the promotion and accommodation or commerce and navigation; commercial and industrial uses; airport, heliport, or other aviation facilities, including runways, terminal buildings, roadways, etc.; highways, streets, roadways, bridges, belt line railroads, parking facilities, power, telephone, telegraph or cable lines or landings, water and gas pipelines, etc.; public buildings, public assembly and meeting places, convention centers, parks, playgrounds, bathhouses and bathing facilities, and golf courses; small boat harbors and marinas, aquatic playgrounds and similar recreational facilities, restaurants, motels, launching ramps, storage sheds, boat repair facilities, administration buildings, public restrooms, bait and tackle shops, chandleries, boat sales establishments, service stations and fuel docks, yacht club buildings, parking areas, pedestrian ways, and landscaped areas. Accordingly, under the Port Act, the PMP is the mechanism that dictates where such allowable uses are to be located and how they shall be improved.

4.9.3.3 Regional

San Diego Association of Governments San Diego Forward: The Regional Plan

San Diego Forward: The Regional Plan (Regional Plan) was adopted by the San Diego Association of Governments (SANDAG) Board of Directors on October 9, 2015, to establish a long-range blueprint for the San Diego region’s growth and development through the year 2050. The Regional Plan was developed in close partnership with the region’s 18 cities and the County government, and aims to provide innovative mobility choices and planning to support a sustainable quality of life in a healthy region, with a vibrant economy. The Regional Plan integrates both the 2004 Regional Comprehensive Plan and the 2050 RTP and Sustainable Communities Strategy (SCS) into one unified plan. By incorporating the SCS, the Regional Plan is in compliance with Senate Bill (SB) 375, which

identifies how the region will address greenhouse gas emissions to meet State-mandated levels and focuses on land use planning and transportation issues in an attempt to develop sustainable growth patterns on a regional level.

4.9.3.4 Local

Existing Port Master Plan

The currently adopted PMP, dated September 2020, guides the physical development of the lands within the District's jurisdiction and also serves as the District's coastal program for purposes of the CCA, as described above. The District's jurisdiction includes the public trust lands (i.e., Tidelands) bayward of the mean high-tide line, submerged lands generally to the U.S. Pierhead Line, and other upland properties, as acquired by or granted to the District. The District manages these lands in trust for the people of the State of California. The proposed PMPU replaces portions of the existing PMP, including defining new water and land use designations and goals and policies. Planning District 5, National City Bayfront, and PD6, Chula Vista Bayfront, and a portion of PD7, South Bay, are not part of the proposed PMPU.

Board of Port Commissioners Transition Zone Policy (Policy No. 725)

In June 2008, the District Board adopted the Transition Zone Policy with the purpose of protecting maritime industrial lands and provide a transition to adjoining residential areas by establishing guidelines to encourage the creation of transition zones between industrial lands and residential neighborhoods in order to minimize conflicts between incompatible land uses. This policy directs the District to work with appropriate member cities, including the City of San Diego and the City of National City, to incorporate Transition Zone land use zoning and appropriate principles into member cities' general and community plans. The District may also acquire property to support maritime industrial uses or easements to preclude development of incompatible land uses within desired Transition Zone areas as it deems appropriate with or without public private partnerships. The specific areas under consideration in this policy include those lands from the northern boundary of the TAMT south to the Sweetwater Channel, bounded on the west by the District Tidelands, extending east from the existing Tidelands to the adjacent residential neighborhoods.

San Diego International Airport Land Use Compatibility Plan

The San Diego International Airport Land Use Compatibility Plan (ALUCP) was adopted on April 3, 2014, and amended on May 1, 2014, with the purpose of promoting compatibility between San Diego International Airport (SDIA) and surrounding land uses. Specifically, the intent of the ALUCP is to protect public health, safety, and welfare in areas around the airport and establishes policies and standards related to noise, safety, airspace protection, and overflight. The ALUCP defines an airport influence area (AIA), which is the boundary in which the ALUCP applies and is the "area in which current and projected future airport-related noise, safety, airspace protection, or overflight factors/layers may significantly affect land use or necessitate restrictions on land use."

The ALUCP establishes two zones within the AIA:

- Review Area 1: the combination of the 60 decibel community noise equivalent level noise contour, the outer boundary of all safety zones, and the Threshold Siting Surfaces (TSSs). A TSS is critical airspace that must be protected to allow for safe approaches to runways. Any objects

penetrating the TSS would cause the runway threshold to be further displaced, reducing available landing distances.

- Review Area 2: the combination of the airspace protection and overflight boundaries beyond Review Area 1.

Planning District 2 and PD3 are partially within Review Area 1 for SDIA, and PD1, PD2, PD3, PD4, and PD10 are within Review Area 2 of the SDIA AIA.

Naval Air Station North Island Airport Land Use Compatibility Plan

The Naval Air Station (NAS) North Island ALUCP was adopted on October 1, 2020, with the purpose of promoting compatibility between NAS North Island and surrounding land uses to protect public health, safety, and welfare in areas around the airport, to the extent that these areas are not already devoted to incompatible uses. As required by the California Public Utilities Commission (Section 21675(b)), the NAS North Island ALUCP is consistent with the safety and noise standards of the 2011 Air Installations Compatible Use Zones (AICUZ) study prepared by the U.S. Navy for NAS North Island. The AICUZ study recognizes that various land uses that are incompatible based on AICUZ guidance have already been developed within the noise contours and safety zones. Due to existing land uses, the AICUZ advises that local agencies avoid actions that would make an existing land use compatibility (or incompatibility) situation worse (for example, by allowing increased densities in the redevelopment of currently low density incompatible land uses) (NAS North Island 2020). The policies of the ALUCP ensure that existing incompatible land uses can be continued, maintained, and modified, subject to specified standards that would prevent an increase in the level of incompatibility.

NAS North Island is located on the western portion of the City of Coronado; PD1, PD2, PD3, PD4, PD7, PD9, and PD10 are located within the AIA for this ALUCP.

Naval Outlying Landing Field-Imperial Beach Airport Land use Compatibility Plan

The Naval Outlying Landing Field-Imperial Beach (NOLF-IB) ALUCP was adopted on October 15, 2015, with the purpose of promoting compatibility between NOLF-IB and surrounding future land uses to provide for the orderly development of NOLF-IB and the area surrounding the facility and to protect public health, safety, and welfare in surrounding areas (NOLF-IB ALUCP 2015). Planning District 7, PD8, and PD9 are within Review Area 2 for NOLF-IB.

San Diego Harbor Safety Plan

The San Diego Harbor Safety Plan is designed to provide mariners who use the waters of San Diego Bay with an up-to-date guide to critical navigation issues to enhance vessel safety, with the ultimate goal of pollution prevention and protection of the region's valuable resources. This plan has been developed by the San Diego Harbor Safety Committee, as mandated in the California Oil Spill Prevention and Response Act of 1990 (Government Code Sections 8574.1 et seq.). The goals of the act are to improve the prevention, removal, abatement, response, containment, cleanup, and mitigation of oil spills in the marine waters of California. The act and its implementing regulations (California Code of Regulations Title 14, Sections 800–802) created harbor safety committees for the major harbors of California to “plan for the safe navigation and operation of tankers, barges, and other vessels within each harbor” by preparing “a harbor safety plan, encompassing all vessel traffic within the harbor.”

Tidelands Parking Guidelines

Adopted in January 2001, the *Tidelands Parking Guidelines* are intended to assist in the determination of how much parking should be provided to serve uses in each of the planning districts on Tidelands. The guidelines focus on the parking demands generated by a specific proposed use or development project on District Tidelands. The guidelines also distinguish between the parking demand generated by a potential use or development and the parking requirements that might result from development of a project on a specific site. However, the guidelines do not address any additional site-specific parking requirements that may occur as a result of developing a particular site. For example, the guidelines do not address the displacement of any existing parking that would occur from a proposed use or development. Factors influencing parking demand include the land use type of the proposed development, transit accessibility, airport accessibility, and pedestrian orientation, whereas factors influencing parking requirements include the demand plus any additional parking requirements created by the displacement of existing parking or other changes in the characteristics of parking in the area of the development (i.e., existing parking shortages and public bay access). The guidelines establish parking demand rates as well as adjustment factors for determining parking requirements of a development.

4.9.4 Project Impact Analysis

4.9.4.1 Methodology

The following impact analysis evaluates the water and land use and planning impacts that would result from future development projects should the proposed PMPU be adopted. The impact analysis under Threshold 1 considers the potential for the proposed PMPU water and land use designations, and future development occurring from implementation of the proposed PMPU, to result in the physical division of an established community. The physical division of an established community most often occurs when development of a large infrastructure project, such as a new freeway or train tracks, traverses an already developed area and divides existing uses, including residential neighborhoods and the neighborhood commercial uses they rely on. Therefore, this analysis considers the potential for the proposed PMPU to introduce any new roadway alignments or other improvements that could separate the components of an established community.

The impact analysis under Threshold 2 discusses any environmental impacts caused by the proposed PMPU due to a conflicts with any land use plans, policies, and regulations that apply to the District and were adopted for the purpose of avoiding or mitigating an environmental impact. The proposed PMPU would not be considered to conflict with the provisions of the identified regional and local plans if it meets the general intent of the applicable plans. A given project need not be in perfect conformity with every policy, nor does State law require precise conformity of a proposed project with every policy or water and land use designation. Courts have also acknowledged that plans attempt to balance a range of competing interests, and that it is nearly, if not absolutely, impossible for a project to be in perfect conformity with each and every policy set forth in the applicable plan. Additionally, in reaching such conclusions, the District may also consider the consequences of denial of a project, which can also result in conflict with other policies. The analysis below provides a brief overview of the most relevant planning documents and their primary goals. However, the District's conclusions on whether conflicts exist are based upon the planning documents as a whole.

Merely being in conflict with a land use plan, policy, or regulation is not necessarily a significant impact under the California Environmental Quality Act (CEQA). Rather, the conflict must result in a significant impact on the environment, which has not already been disclosed in the other resource chapters of this Program Environmental Impact Report (PEIR). In addition, the proposed PMPU must be consistent with the California Coastal Act, Port Act, and Public Trust Doctrine. Such consistency is addressed in the analysis below.

4.9.4.2 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the State CEQA Guidelines and provide the basis for determining whether the water and land use and planning impacts resulting from implementation of the proposed PMPU are significant or less than significant. The determination of whether a water and land use and planning impact would be significant is based on the professional judgment of the District as Lead Agency and the recommendations of qualified personnel at ICF, all of which is based on the evidence in the administrative record.

Impacts are considered significant if the proposed PMPU would result in any of the following:

1. Physically divide an established community.
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.9.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policies would have the potential to reduce or avoid impacts associated with water and land use and planning as a result of implementation of the proposed PMPU and are considered in the impact analysis that follows.

WLU Policy 1.1.1 The District shall provide water and land use maps that illustrate the general pattern and relationship of various water and land use designations consistent with the Port Act. Refer to:

- Figure 3.1.1, Baywide Water and Land Use Designations;
- Table 3.1.2, Allowable Use Types for Water Use Designations; and
- Table 3.1.3, Allowable Use Types for Land Use Designations.

WLU Policy 1.1.2 Water and land uses shall be developed in accordance with:

- Figure 3.1.1, Baywide Water and Land Use Designations;
- Table 3.1.2, Allowable Use Types for Water Use Designations; and
- Table 3.1.3, Allowable Use Types for Land Use Designations.

Uses not specified in Table 3.1.2, Allowable Use Types for Water Use Designations and Table 3.1.3, Allowable Use Types for Land Use Designations, shall not be permitted unless otherwise allowed pursuant to Section 6.3, Development Conformance (Chapter 6, Plan Implementation and Development Conformance).

WLU Policy 1.1.3 Secondary uses shall be allowed only limited development potential to provide protection for primary uses under the following conditions:

- a. Secondary uses are permitted in water and on land only as identified in Table 3.1.2, Allowable Use Types for Water Use Designations and Table 3.1.3, Allowable Use Types for Land Use Designations.
- b. Development of specific secondary uses shall comply with applicable regulations (refer to Section 3.1.8, Secondary Use Calculations).
- c. Secondary uses must be consistent with the standards included in Chapter 4, Baywide Development Standards, and Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

WLU Policy 1.1.6 Allowable water and land uses within the District shall be in accordance with one of six Public Trust–related categories (refer to Table 3.1.2, Allowable Use Types for Water Use Designations and Table 3.1.3, Allowable Use Types for Land Use Designations):

- a. Commerce
- b. Environmental Stewardship
- c. Fisheries
- d. Navigation
- e. Recreation
- f. Government Facilities

WLU Policy 1.2.1 Allowable water and land uses listed in Table 3.1.2, Allowable Use Types for Water Use Designations and Table 3.1.3, Allowable Use Types for Land Use Designations, shall be categorized based on their locational and functional dependency to the water, consistent with the Coastal Act priorities, as follows:

- a. Coastal-dependent: Any development or use that requires a site on or adjacent to marine or coastal waters to be able to function.
- b. Coastal-related: Any development or use that is dependent on a coastal-dependent development or use.
- c. Coastal-enhancing: Any development or use that does not require a location directly near marine or coastal waters to be able to function but that provides visitor-serving functions and contributions that enhance the Public Trust responsibilities of the District.

Any additional water and land uses added to the Table 3.1.2, Allowable Use Types for Water Use Designations and Table 3.1.3, Allowable Use Types for Land Use Designations, under a future amendment to the Plan shall be categorized accordingly.

WLU Policy 1.3.1 The District shall prioritize allowable uses based on their location and functional dependency to the coast. The priority is as follows:

- a. Coastal-dependent
- b. Coastal-related
- c. Coastal-enhancing

These categories will be used to identify the type and extent of planned improvements or contributions that will be required of development, based on a development’s mix of coastal-

dependent, coastal-related, and coastal-enhancing uses (refer to WLU Goal 7). These planned improvements facilitate public health and safety and the public welfare and provide public coastal access.

WLU Policy 2.1.1 The planning districts shall be established based on their physical, recognizable location and consideration of established municipal boundaries and shall be organized in the following manner (refer to Figure 3.1.1, Baywide Water and Land Use Designations):

- Planning District 1: Shelter Island
- Planning District 2: Harbor Island
- Planning District 3: Embarcadero
- Planning District 4: Working Waterfront
- Planning District 5: National City Bayfront – not a part of this Plan
- Planning District 6: Chula Vista Bayfront – not a part of this Plan
- Planning District 7: South Bay – Pond 20 portion not a part of this Plan
- Planning District 8: Imperial Beach Oceanfront
- Planning District 9: Silver Strand
- Planning District 10: Coronado Bayfront

WLU Policy 2.1.2 Planning districts shall be organized by subdistricts, as necessary, to differentiate their distinct character. For planning districts not containing subdistricts, reference to subdistrict visions, policies, and standards shall apply to the entire planning district.

WLU Policy 2.2.1 The District and its permittees shall implement planned improvements and special allowances to facilitate public health, safety, and welfare and provide public coastal access and enjoyment of the waterfront (refer to Chapter 5, Planning Districts, Planned Improvements).

WLU Policy 2.2.3 Phased development shall be coordinated in a manner to ensure that landside and water access improvements are integrated in a cohesive and complementary fashion (refer to Chapter 5, Planning Districts, Planned Improvements).

WLU Policy 2.3.1 The District and its permittees shall support opportunities for strategic placement of interpretive informational signage and commemorative artifacts that convey Tideland’s maritime and cultural history.

WLU Policy 2.3.2 The District and its permittees shall share the history of Tidelands by engaging in strategic engagement activities with the public.

WLU Policy 3.1.1 A network of pathways and water-based transfer points shall connect the comprehensive waterfront open space network and public realm areas on Tidelands.

WLU Policy 3.1.2 The District—independently, assigned through partnerships with the District, or through CDPs issued by the District—shall plan, design, and implement a comprehensive waterfront open space network that provides access to and throughout the public realm on Tidelands and enhances proximate connections to the water for the public and priority coastal uses. These improvements shall be developed in accordance with:

- a. Chapter 4, Baywide Development Standards; and

- b. Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

WLU Policy 3.1.3 The District and its permittees shall maintain, protect, and enhance existing public coastal-dependent recreational facilities, such as boat ramps and piers that provide coastal access.

WLU Policy 3.1.4 Permittees of coastal-enhancing development shall provide direct access to the water's edge and increase physical accessibility to the water by providing overlooks, step-down areas, or similar opportunities for the public to access the water, especially in areas where those opportunities do not exist.

WLU Policy 3.1.5 Protect and, where feasible, expand waterside amenities, such as waterbased transfer points, overnight transient docking, free or lower cost short-term public docking, anchorages, launch areas for nonmotorized watercraft, and boat launch facilities.

WLU Policy 3.1.6 A waterside promenade shall be provided as part of development that abuts the waterfront, in accordance with:

- a. Chapter 4, Baywide Development Standards; and
- b. Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

WLU Policy 3.1.7 Nonwaterside development with obstructed public access shall provide physical connections (e.g., walkways) to the water, in accordance with:

- a. Chapter 4, Baywide Development Standards; and
- b. Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

WLU Policy 4.1.1 There shall be no net loss of acreage designated as Recreation Open Space in a subdistrict or in a planning district if no subdistrict exists.

WLU Policy 4.1.2 Recreation Open Space should be designated along the water's edge.

WLU Policy 4.1.3 Recreation Open Space areas shall be publicly accessible to a diverse user group with the intent of providing a variety of water-oriented experiences.

WLU Policy 4.1.4 Public accessways and recreation facilities provided as part of development shall be maintained for public use over the anticipated life of the development with which they are associated.

WLU Policy 4.1.5 The design and location of Recreation Open Space shall be in accordance with Section 4.2, Recreation Open Space and Activating Features Standards (Chapter 4, Baywide Development Standards).

WLU Policy 4.1.6 The District shall require, where feasible, the integration of non-privatized, physically accessible public realm areas and amenities into development such as parks, courtyards, water features, gardens, passageways, paseos, and plazas.

WLU Policy 4.1.7 The District shall require permittees of coastal-enhancing development to allow, maintain, and promote free, public access to the public realm on their development site.

WLU Policy 4.1.8 No new private or quasi-private piers, gangways, or docks associated or connected to residential uses shall be permitted on Tidelands.

WLU Policy 4.2.1 The District shall require permittees of coastal-enhancing development to provide a wide array of uses for the public that:

- a. Offer a variety of recreational uses;
- b. Complement adjacent waterfront uses and activities; and
- c. Maximize attributes of each location to offer a range of experiences to the user and appeal to a variety of visitors.

WLU Policy 4.2.2 The District shall encourage establishment of activating features that support existing amenities and introduce new activities in recreation areas. Permittees, of development containing Recreation Open Space within the leasehold, shall plan, design, and implement activating features, which are:

- a. Commensurate with the intensity of land uses within the permittee's development site;
- b. Consistent with an Activation Plan developed by the permittee and approved by the District;
- c. In accordance with Chapter 4, Baywide Development Standards; and
- d. In accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

WLU Policy 4.2.3 Attractions are encouraged within the Commercial Recreation land use designation and shall be:

- a. Sited to increase the use of, and be integrated with, the waterfront experience;
- b. Located in areas supported by mobility hubs, curbside management, and pedestrian amenities to support multimodal access throughout Tidelands; and
- c. Complementary to other visitor-serving attractions.

WLU Policy 4.2.6 All parks, including those within leaseholds, shall be open to the general public during park hours for at least 85 percent of the year. Public access to parks shall not be limited (i.e., exclude the public or require an admission fee) for more than 15 percent of the year for permitted temporary large special events (in accordance with the District's procedures and guidelines, once established). The 15 percent shall be distributed throughout the year and not occur only in the summer months.

WLU Policy 4.3.1 The District shall encourage boating and pier access for recreational and subsistence fishing throughout Tidelands, where feasible, by requiring permittees of applicable development to provide public fishing or viewing piers and boating access. Maintenance may be provided by third parties.

WLU Policy 4.3.2 The District shall retain, where feasible, temporary anchorages for transient recreational vessels.

WLU Policy 4.3.3 Designated anchorage areas shall be located:

- a. To minimize interference with navigation; and
- b. Where support facilities are available.

WLU Policy 4.3.4 Permittees of recreational marina development shall incorporate low cost transient docking slips in their recreational marina.

WLU Policy 4.3.5 Proposed recreational boating facilities in Tidelands shall, to the extent feasible, be designed and located in such a fashion so as not to interfere with the needs of the commercial fishing industry.

WLU Policy 5.1.1 The District shall continue to maintain, expand, and enhance District facilities consistent with the Port Act and in support of the District's mission. For more detail, refer to Chapter 1, Introduction.

WLU Policy 5.1.2 Conservation/Intertidal and Conservation Open Space use designations shall be enhanced, restored, and protected as further described in ECO Goal 1 (Chapter 3.3, Ecology Element).

WLU Policy 5.1.3 All development shall be located, designed, and constructed to:

- a. Give highest priority to the use of existing land space in harbors for coastal-dependent port purposes, including, but not limited to, navigational facilities, shipping industries, and necessary support and access facilities.
- b. Provide for other benefits consistent with the Public Trust, including, but not limited to: improved recreational opportunities in the public realm, including Recreation Open Space that is adjacent to the water's edge, or the conservation of adjacent wildlife habitat areas, to the extent feasible.

WLU Policy 5.2.1 The District shall encourage new development or rehabilitation of District assets, including improvements to maritime berthing facilities.

WLU Policy 5.2.2 Areas for deep-water berthing shall be preserved for uses and activities that depend on deep water, such as commercial fishing facilities, research vessels, cruise ships, cargo ships, and visiting military vessels. Deep-water berthing areas may be maintained by third parties through partnerships or leases with the District.

WLU Policy 5.2.3 Conversion of land use designations directly adjacent to deep-water berthing to an alternative designation that may be in conflict with or that may restrict access to the deep-water berthing operations or activities is discouraged.

WLU Policy 5.2.4 The District shall support maintenance and development of maritime berthing and related facilities to sustain the continued operations of maritime facilities.

WLU Policy 5.2.5 Maritime operations are inherently coastal-dependent or coastal-related uses and are important to the District and the region. Therefore, maritime operations may be allowed to limit waterside access opportunities in and around active operations, but alternative access shall be provided to promote coastal access to the maximum extent feasible.

WLU Policy 5.3.1 The District shall protect commercial fishing water and land use areas.

WLU Policy 5.3.2 Permittees of development shall prioritize and ensure the functionality of commercial fishing operations by locating landside support uses, such as parking, loading and offloading, and processing, immediately adjacent to associated berthing areas.

WLU Policy 5.3.3 The District shall support commercial fishing operations by facilitating improvements to piers and to storage, loading and offloading, and processing areas at existing commercial fishing facilities.

WLU Policy 5.3.4 The District shall promote the redevelopment of existing commercial fishing facilities.

WLU Policy 5.3.5 The District shall allow the redevelopment of sportfishing operations that do not interfere with commercial fishing operations.

WLU Policy 6.1.1 Permittees of development are encouraged to provide a variety of lower cost visitor and recreational facilities to improve coastal access.

WLU Policy 6.1.2 Recreation Open Space areas shall support programming and a variety of recreational activities, with a wide range of affordability and price points to ensure all visitors are able and encouraged to experience the waterfront.

WLU Policy 6.1.3 To offer flexibility to permittees, the District may offer a range of geographic options or a District-established in-lieu fee program for the development of new, or replacement, lower cost visitor and recreational facilities.

WLU Policy 6.1.4 The District may elect to establish an in-lieu fee program that permittees may participate in, to satisfy the requirement for provision of lower cost visitor and recreational facilities, with the following conditions:

- a. The in-lieu fee program shall apply only where the provision of lower cost visitor and recreational facilities is not feasible either on the existing development site or elsewhere on Tidelands.
- b. Any collected in-lieu fees shall be used on Tidelands for the provision of lower cost visitor and recreational facilities.
- c. For lower cost overnight accommodations only, the following exceptions apply:
 - 1) In assessing the feasibility for on-Tidelands lower cost accommodations, the District may consider whether the required amount of new or replaced lower cost overnight accommodations can be accomplished in one development.
 - 2) Collected in-lieu fees shall be used to develop only lower cost overnight accommodations (in order of priority):
 - i. On Tidelands, or
 - ii. In the San Diego County Coastal Zone, if on Tidelands is not feasible.

WLU Policy 6.2.1 Lower cost visitor and recreational facilities shall be protected in the aggregate on Tidelands. Protection of existing facilities allows for preventive maintenance, major maintenance, or facility upgrades even if temporary closure or limited public access to the facility occurs during these activities and times.

WLU Policy 6.2.2 Replacement of lower cost overnight accommodations shall be provided (in order of priority) based on feasibility:

- a. On the existing development site;
- b. Elsewhere on Tidelands; or

- c. Through contribution to a District-established in-lieu fee program, if created, and the in-lieu fees are contributed before commencement of construction of new higher cost overnight accommodations and displacement of any lower cost overnight accommodations.

WLU Policy 6.2.3 Replacement of lower cost overnight accommodations occurring elsewhere on Tidelands (refer to WLU Policy 6.2.2[b]) shall apply one of the following conditions:

- a. Must be in place before the removal of the displaced lower cost overnight accommodations; or
- b. Must compensate for the temporary loss (i.e., a lower cost overnight accommodation[s] is removed before replacement lower cost overnight accommodations are approved for use or occupancy). This may be addressed through a District-established in-lieu fee program (refer to WLU Policy 6.1.3).

WLU Policy 6.2.4 Lower cost overnight accommodations displaced through new development, redevelopment, demolition, or closure shall be replaced with lower cost overnight accommodations at a ratio to be determined by a lower cost overnight accommodation offset program.

WLU Policy 6.2.5 Displaced lower cost visitor and recreational facilities, excluding overnight accommodations, shall be replaced with comparable facilities that may be of a similar or different type if specific conditions are demonstrated through a comparative demand study (refer to WLU Policy 6.2.6 and WLU Policy 6.2.7). The comparative demand study must be submitted and approved by the District before the project application is submitted to the District.

WLU Policy 6.2.6 For replacement of displaced lower cost visitor and recreational facilities, excluding overnight accommodations, with a facility (or facilities) of a similar type(s) (refer to WLU Policy 6.2.5), the comparative demand study must demonstrate:

- a. The new facility will likely result in an equal or increased amount of public use when compared to the facility being replaced; and
- b. When implemented, the new facility will be of a scale and size comparable to those of other, similar facilities in a coastal setting.

WLU Policy 6.2.7 For replacement of displaced lower cost visitor and recreational facilities with a facility (or facilities) of different type(s) (refer to WLU Policy 6.2.5), the comparative demand study must demonstrate:

- a. The new lower cost visitor and recreational facility will likely provide greater opportunities for a variety of visitors to access and recreate on Tidelands than the facility being replaced; and
- b. There is an increase in demand for the replacement lower cost visitor and recreational facility compared with the existing facility.

WLU Policy 6.3.1 Development containing higher cost overnight accommodations is required to provide lower cost overnight accommodations. The provision of lower cost overnight accommodations may be provided through:

- a. Construction of new facilities,
- b. Conversion of existing overnight accommodations to lower cost overnight accommodations, or
- c. Contribution to a District-established in-lieu fee program (refer to WLU Policy 6.1.3).

WLU Policy 6.3.2 Development that includes new higher cost overnight accommodations shall provide lower cost overnight accommodations units at an amount equivalent to 25 percent of the total number of the proposed higher cost overnight accommodation units.

WLU Policy 6.3.3 Lower cost overnight accommodations required because of development of higher cost overnight accommodations shall be provided on the existing development site. If it is proven that development of lower cost overnight accommodations is infeasible on-site, at the discretion of the District, the requirement for lower cost overnight accommodations may then be satisfied elsewhere on Tidelands, or lastly through a contribution to a District-established in-lieu fee program.

WLU Policy 7.1.1 Permittees of development derives benefits from its location on Tidelands and, accordingly, shall provide or contribute to planned improvements that facilitate public health and safety and the public welfare and provide public coastal access and enjoyment of the waterfront.

WLU Policy 7.1.2 Except as set forth under WLU Policy 7.3.3, permittees of all major development shall be required to provide or contribute toward planned improvements identified for a planning district in Chapter 5, Planning Districts, Planned Improvements. The three primary categories of planned improvements are defined below:

- a. Landside access: Improvements to transportation and mobility infrastructure that enhance the public's ability to access and explore the public realm and perform commerce on Tidelands. Landside access may include mobility hubs, improvements to a variety of accessways, and implementation of the bayfront circulator.
- b. Coastal access: Physical features designed to provide new or enhance existing water access. Examples include pier improvements, overnight transient docking and mooring, public water access, and short-term public docking.
- c. Visitor-serving commercial uses: Visitor-serving commercial uses provide opportunities for the public to access and enjoy Tidelands, including the use of non-water-oriented retail and overnight accommodations.

Permittees of minor development may be required to provide or contribute toward planned improvements as identified for a planning district in Chapter 5, Planning Districts, Planned Improvements and as supported by a subsequent program created by the District.

WLU Policy 7.2.1 The level of required contribution to planned improvements for permittees of major development shall be based on their assigned category, as described below and as identified in each corresponding planning district or subdistrict:

- a. Coastal-dependent: Development of coastal-dependent uses shall provide or contribute to mobility hub planned improvements to ensure the efficient movement of goods and people to, from, and around Tidelands and for public health and safety and for the public welfare.
- b. Coastal-related: Development of coastal-related uses shall provide or contribute to enhancement of transportation and mobility infrastructure and shall enhance the public's ability to access and explore the public realm and perform commerce on Tidelands. In addition, development of coastal-related uses shall provide or contribute to landside public access planned improvements. These features further public health and safety and the public welfare by providing safe and efficient access to the Bay.

- c. Coastal-enhancing: Development of coastal-enhancing uses shall be required to provide or contribute to landside public access and coastal access features as a part of such development. These features further public health and safety and the public welfare by providing safe and efficient access to the Bay.

Permittees of development may be required to provide similar contributions or less of a contribution toward planned improvements subject to the discretion of the District.

A list of planned improvements for development is set forth for each subdistrict (or planning district, where applicable). All requirements shall be provided concurrent with the proposed development consistent with the applicable Chapter 4, Baywide Development Standards, and Chapter 5, Planning Districts (including any development standards within the applicable planning district or subdistrict), to further public health and safety and the public welfare, the Coastal Act, the Port Act, and Port Master Plan goals.

WLU Policy 7.3.1 The District shall establish a program for the implementation of planned improvement, including how contributions may be made by development. In this program, the District may establish a financing mechanism as an alternative measure to satisfy the planned improvement requirements.

WLU Policy 7.3.2 Two or more new permittees of development may partner to contribute to the implementation and funding of one or more planned improvements.

WLU Policy 7.3.3 All developments shall provide or contribute to planned improvements in a planning district or subdistrict. However, certain types of developments are excluded from this requirement. The following developments are excluded from providing or contributing to planned improvements:

- a. District-administered projects;
- b. Government agency facilities responsible for safety, security, and customs;
- c. Commercial fishing facilities;
- d. Lower cost visitor-serving overnight accommodations; and
- e. Any planned improvement (as listed in the subdistrict) developed independently or as part of a major development.

WLU Policy 7.3.4 Development implemented in phases shall submit to the District a project phasing plan that addresses how the development of proposed improvements will align with the phasing, financing, and construction of the proposed development. This phasing plan shall be submitted to the District for its approval before issuance of the first Coastal Act Approval for the development other than those needed for due diligence efforts.

WLU Policy 7.3.5 Locations of planned improvements shall be prioritized as follows:

- a. On-site;
- b. In the same subdistrict as the proposed development;
- c. In the same planning district as the proposed development activity; or
- d. Elsewhere on Tidelands in the Coastal Zone.

Further detail regarding planned improvements is specified in Chapter 5, Planning Districts, Planned Improvements.

WLU Policy 8.1.1 The District shall build on existing agency partnerships to strengthen communications, develop new methods to share information, and coordinate initiatives to improve the District's waterfront.

WLU Policy 8.1.2 The District shall provide opportunities for the public to learn about the District's mission and projects through community engagement, participation, and communication.

WLU Policy 8.1.3 The District shall continue to provide opportunities for interested and affected parties (including but not limited to tenants, agencies, stakeholders, and the general public) to engage in early, active, and ongoing participation in public decision-making processes.

WLU Policy 8.1.4 The District may coordinate with adjacent jurisdictions to align development standards for consistency between a subdistrict's development standards and those of the adjacent area, where feasible.

M Policy 1.2.3 The District shall encourage the development of mobility hubs rather than surface parking to provide proximate connections to the water and Tidelands, where feasible.

M Policy 1.2.7 The District shall require, in coordination with permittees of development, the planning, designing, and implementation of a comprehensive, nondigital wayfinding signage system to guide.

M Policy 1.3.4 Permittees of development that generated parking demand shall identify and secure, as appropriate, vehicular parking sufficient to serve that development's specific use without relying upon or reducing existing vehicular spaces dedicated to public uses and when alternative mobility modes that offset the need for parking are not feasible or sufficient to meet total parking demand. Parking shall be provided through one or more of the following means:

- a. On-site parking.
- b. Shared agreements with adjoining development.
- c. Agreements with off-site parking facilities, which may be located on or off Tidelands, within a quarter-mile walking distance from the uses they serve. A greater distance may be acceptable if a mobility plan, showing how patrons would connect to and from the parking, is provided and accepted by the District.
- d. Participation in the establishment of planned mobility improvements, such as mobility hubs or shared parking facilities as specified in the associated subdistrict and supported by WLU Goal 3 and WLU Goal 7 (Chapter 3.1, Water and Land Use Element, [of the PMPU]) and ECON Goal 1 (Chapter 3.6, Economics Element, [of the PMPU]).

M Policy 1.3.5 The District shall periodically monitor the public parking demand on Tidelands to ensure that public spaces are being efficiently managed and used and to review and update the District's parking guidelines, as necessary.

M Policy 1.3.6 The District's parking guidelines shall provide standards and direction for the requirements and process related to providing and accounting for established parking (supportive of associated specific uses), short-term parking (such as for construction vehicles), curbside management strategies, and event parking.

M Policy 1.3.7 The District shall reallocate or combine parking, where feasible, into mobility hubs or other consolidated parking facilities to allow for additional public open space, development, transit opportunities, and bicycle facilities. This policy applies both to parking allocated for specific developments and public parking. If parking is displaced as part of development, the following steps shall be taken:

- a. Conduct a study to determine the parking demand for the spaces that will be displaced;
- b. Identify a location to accommodate parking demand if the results of the study confirm the need for parking. Spaces should ideally be situated within a quarter-mile walking distance from the uses they serve, on or off Tidelands. A greater distance may be acceptable if a mobility plan showing how patrons would connect to and from the parking is provided and accepted by the District;
- c. Provide evidence that the new parking location has the capacity to accommodate the demand for displaced parking spaces and that needed parking spaces have been secured.

M Policy 1.3.8 New structured parking should be designed for vehicle use in the short term and then for repurpose to a nonvehicle use if parking demand decreases.

ECON Policy 1.1.1 The District shall support and nurture long-term development partnerships that further Public Trust objectives

ECON Policy 1.1.2 The District shall leverage public and private partnerships to invest in Tidelands' infrastructure and facilities that support the District's mission and fiduciary responsibilities.

ECON Policy 1.1.3 The District shall continue to implement existing, and explore new, joint programs with academic institutions, private industry, public agencies, and nongovernmental organizations to advance shared economic, social, and environmental goals that lead to a prosperous planet, people, and portfolio.

ECON Policy 1.1.4 The District shall continue to pursue strategic partnerships with the military and military-focused industry to support U.S. Department of Defense Mission Readiness.

ECON Policy 1.2.2 The District shall continue to reinvest lease revenues to support financing and maintenance of public improvements in alignment with Coastal Act obligations, including lower cost visitor serving and recreational facilities such as parks, promenades, public piers, and public art.

ECON Policy 2.1.1 The District shall maintain a mix of water and land uses that meet the need of established Tidelands industries and provide opportunities for emerging Public Trust-consistent uses. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided.

ECON Policy 2.1.2 The District shall coordinate with permittees to provide infrastructure that supports a mix of water and land uses, including the needs of established Tidelands industries and emerging Public Trust-consistent businesses, while also providing environmental benefit.

ECON Policy 2.2.1 Maintain the District's marine terminals to the standards of the National Port Readiness Network and the Commercial Strategic Seaports Program, which are administered by the U.S. Department of Transportation's Maritime Administration. The Strategic Port designation commits the District to providing cargo and vessel operations in support of national defense efforts on short notice.

ECON Policy 2.2.2 The District shall coordinate with federal, State, regional, and local agencies, and utilities to develop and implement strategies for public improvements that provide the necessary services to support the District's Strategic Port responsibilities.

ECON Objective 2.3 Retain and encourage a diverse mix of coastal-dependent and supporting coastal-related industries and businesses.

ECON Policy 2.3.1 The District shall invest in opportunities to protect and preserve the functionality and accessibility of marine and maritime industrial areas and deep-water berthing piers for maritime and marine uses.

ECON Policy 2.3.2 The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions.

ECON Policy 2.3.3 The District shall provide maritime and marine infrastructure for operation and maintenance of commercial and recreational vessels. Maritime and marine infrastructure may be provided by third parties, including District tenants through public-private partnerships and leases with the District.

ECON Policy 2.3.4 The District shall provide coastal-dependent and coastal-related industrial leasing opportunities to support the maritime and marine industry on Tidelands.

ECON Policy 2.3.5 The District shall strive to maintain a diverse mix of cargo and marine terminal activities for long-term economic resiliency.

ECON Policy 2.3.6 The District shall promote and designate areas for the shipbuilding, repair, and maintenance industry to support the U.S. military, research organizations, and other important commercial fleets (e.g., tugs or ferries) that are home-ported in Tidelands or other West Coast ports and harbors.

ECON Policy 2.3.7 The District shall coordinate with the cruise industry to identify infrastructure and marketing opportunities that improve the industry's economic viability and increase the contribution to the regional economy.

ECON Policy 2.3.8 The District shall coordinate with the cruise ship industry to implement modifications to relevant Tidelands support facilities to accommodate increases in cruise demand, both in terms of type and volume, such as landside transportation services for passengers, passenger processing, and baggage handling.

ECON Policy 2.3.9 The District and applicable permittees shall support existing recreational boating on Tidelands through maintenance of marina-related facilities, including docks, piers, slips, and boat launch ramps.

ECON Policy 2.3.10 The District and applicable permittees shall promote opportunities for the public to learn, share, and enjoy recreational boating through boating education programs, organizations, and clubs.

ECON Policy 2.3.11 The District shall coordinate with commercial fishing, recreational fishing, and sportfishing operations to identify and prioritize facility improvements that benefit the fishing business community.

ECON Policy 2.3.12 The District shall explore innovative financing mechanisms and partnerships to increase the economic prosperity and environmental sustainability of the fishing communities on Tidelands.

ECON Policy 2.3.13 The District shall support the promotion of fishing-related events and complementary visitor-serving opportunities in fishing areas to provide economic prosperity of fishing in the region.

ECON Policy 2.3.14 The District shall promote and support the commercial fishing industry and its longevity as a priority coastal-dependent use and economic contributor to Tidelands, the region, and California through such efforts as joint public-private marketing, fishing-related festivals, and other fishing events and activities.

ECON Policy 2.3.15 The District shall support commercial fishing on Tidelands and its enhancement by maintaining and improving existing commercial fishing-related infrastructure, such as docks, piers, slips, and landside support facilities.

ECON Policy 2.3.16 The District shall promote and support sportfishing charter industry as a priority coastal-dependent use and valuable economic contributor through such efforts as joint public-private marketing, fishing-related festivals, and other fishing events and activities.

ECON Policy 2.3.17 The District shall promote and support recreational fishing on Tidelands by providing informational signage about recreational fishing opportunities at public locations, such as fishing piers and boat launches, and promoting recreational fishing through joint public-private marketing, fishing-related festivals, and other fishing events and activities.

ECON Policy 2.4.1 The District encourages the provision of a variety of active and passive recreational opportunities to attract a diverse mix of visitors to Tidelands.

ECON Policy 2.4.2 The District shall promote the creation of diverse activating features in areas designated with a Recreation Open Space land use to provide a variety of opportunities for visitors to explore and enjoy Tidelands.

ECON Policy 2.4.3 The District shall promote and support implementation of visitor-serving development and amenities that celebrate the San Diego region's binational setting, natural resources, history, culture, and arts.

ECON Policy 2.4.4 The District shall promote and support a diversified hotel portfolio and corresponding elements of the hospitality industry and encourage their expansion.

ECON Policy 2.5.1 The District shall promote established and emerging coastal-dependent commercial and industrial sectors throughout Tidelands and may choose to promote through joint marketing campaigns and participation in conferences or other business development programs.

ECON Policy 2.5.2 The District shall periodically assess the water and land use needs of the recreational, commercial, and industrial sectors on Tidelands to assist in planning for and facilitating economic growth through surveys of existing occupants, tenants, and permittees and analysis of economic forecasts.

ECON Policy 3.1.1 The District shall examine the redevelopment of underused commercial and industrial water and land areas for established and emerging coastal-dependent industries.

ECON Policy 3.1.2 The District shall encourage innovative coastal-dependent endeavors through an assortment of programs and partnerships.

ECON Policy 3.1.3 The District shall explore and promote the creation of habitat mitigation banks on Tidelands in cooperation with regional, State, and Federal resource agencies to offset potential future development impacts and provide compensatory mitigation opportunities.

ECON Policy 3.1.4 The District shall support ecotourism through coordination with other public agencies, academic institutions, nonprofits, or private industry to promote conservation awareness and enjoyment of the Bay.

EJ Policy 3.1.2 The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in Portside Communities.

4.9.4.4 Project Impacts and Mitigation Measures

Threshold 1: Physically divide an established community?

Impact Analysis

Impacts of Water and Land Uses

Construction

The proposed PMPU serves as a long-term planning blueprint for future development on District Tidelands. Approval of the PMPU would result in new water and land uses that would guide future development throughout the proposed PMPU area. Construction activities related to future development projects could result in temporary changes to the area surrounding individual project sites related to the presence of construction equipment, construction noise, etc., which could also include temporary roadway or walkway closures requiring detours. However, such temporary features would not divide an established community, and physical access through such areas would be maintained. As also discussed in Section 4.14, *Transportation, Circulation, and Mobility*, under Threshold 1, encroachments into rights-of-way would typically be subject to local permits and associated traffic control plans designed to ensure detours are provided and access is maintained. Aside from temporary roadway or walkway closures adjacent to a project site, construction activities occurring under the proposed PMPU would largely be contained within individual parcel boundaries of a project site and would not result in the installation of substantial infrastructure or other features such that the physical division of a community could occur. Furthermore, the proposed PMPU would not involve the construction or removal of housing because, per the Public Trust Doctrine, residential uses are prohibited on Tidelands. As such, construction associated with implementation of the proposed PMPU would not result in the physical division of an established community and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, *Project Description*, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the

proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would generally include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction and operation of a Waterfront Destination Park at the foot of Navy Pier. The implementation of this option would result in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU.

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to the physical division of an established community.

Construction activities associated with Option 1 would be similar to those described above, including temporary changes to the area surrounding the project site related to the presence of construction equipment, construction noise, etc., which could also include temporary roadway or walkway closures requiring detours. Aside from temporary roadway or walkway closures adjacent to the project site, construction activities occurring under implementation of Option 1 would largely be contained within the individual parcel boundary of the project site and would not result in the installation of substantial infrastructure or other features such that the physical division of a community could occur. Furthermore, construction activities under Option 1 would not involve the construction or removal of housing because, per the Public Trust Doctrine, these uses are not allowed within the Tidelands. As such, construction and operation associated with implementation of Option 1 would result in a less-than-significant impact and would not result in any additional or more severe impacts related to the physical division of an established community than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to the physical division of an established community.

Construction activities associated with Option 2 would be similar to those described above, including temporary changes to the area surrounding the project site related to the presence of construction equipment, construction noise, etc., which could also include temporary roadway or walkway closures requiring detours. Aside from temporary roadway or walkway closures adjacent to the project site, construction activities occurring under implementation of Option 2 would largely be contained within the individual parcel boundary of the project site and would not result in the installation of substantial infrastructure or other features such that the physical division of a community could occur. Furthermore, construction activities under Option 2 would not involve the construction or removal of housing because, per the Public Trust Doctrine, these uses are not allowed within the Tidelands. As such, construction associated with implementation of Option 2 would result in a less-than-significant impact and would not result

any additional or more severe impacts related to the physical division of an established community than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to the physical division of an established community.

Construction activities associated with Option 3 would be similar to those described above, including temporary changes to the area surrounding the project site related to the presence of construction equipment, construction noise, etc., which could also include temporary roadway or walkway closures requiring detours. Aside from temporary roadway or walkway closures adjacent to the project site, construction activities occurring under implementation of Option 3 would largely be contained within the individual parcel boundary of the project site and would not result in the installation of substantial infrastructure or other features such that the physical division of a community could occur. Furthermore, construction activities under Option 3 would not involve the construction or removal of housing because, per the Public Trust Doctrine, these uses are not allowed within the Tidelands and none currently exist within the Tidelands. As such, construction associated with implementation of Option 3 would result in a less-than-significant impact and would not result in any additional or more severe impacts related to the physical division of an established community than buildout of the proposed PMPU without Option 3.

Operation

The proposed PMPU area encompasses a waterfront area that includes public parks, hotels, restaurants, marinas, yacht- or marina service-related businesses, marine terminal, ship building facilities, and ship repair yards. The proposed PMPU proposes adjustments to the acreages of water and land use designations throughout the proposed PMPU area that would enable future development intended to balance the demand of the various uses within the Tidelands. In addition, the PMPU proposes the reconfiguration of existing roadways including, among others, North Harbor Drive, the North Harbor Drive/West Harbor Drive right-of-way, and West Harbor Drive/East Harbor Drive between the Harbor Drive/Market Street intersection and Park Boulevard. Roadway improvements would involve enhancements within existing roadway alignments to accommodate multi-modal opportunities, including vehicular traffic, transit, pedestrian pathways, bikeways, and pedestrian crossings.

The proposed adjustments to water and land use designations, future development projects, and roadway improvements in the PMPU area would not introduce features, such as new roadway alignments or other infrastructure that would cut through or otherwise physically divide an established community. While several planning districts could include the development of additional recreational boat berthing slips, which would require the extension of existing docks or piers, any such improvement would be designed in coordination with the District's Maritime Department and the San Diego Bay Pilots Association to ensure that operation of expanded marinas would not adversely affect existing navigation routes for water taxi/ ferries, shipping vessels, cruise ships, military vessels, recreational boats, etc. Furthermore, as noted above, the proposed PMPU would not involve removal of existing residential uses because those uses are not allowed within the Tidelands. In addition, the operation of future development projects would not involve activities that would physically divide established communities in the surrounding area.

The proposed PMPU contains several policies that promote connections within Tidelands. The District would implement planned improvements to provide public coastal access and enjoyment of the waterfront (WLU Policy 2.2.1); implement a comprehensive waterfront open space network that provides access to and throughout the public realm (WLU Policy 3.1.2); require permittees of coastal-enhancing development to provide direct access to the water's edge and increase physical accessibility to the water (WLU Policy 3.1.7); and require that non-waterside development with obstructed public access provide physical connections (e.g., walkways) to the water. The proposed PMPU would also require public accessways to be provided as part of development to be maintained for public use (WLU Policy 4.1.4); would require integration of non-privatized, physically accessible public realm areas and amenities into development (WLU Policy 4.1.6); and would not allow any new private or quasi-private piers connected to residential uses (WLU Policy 4.1.8). Additionally, the proposed PMPU would require the planning, designing, and implementation of a comprehensive, nondigital wayfinding signage system (M Policy 1.2.7). These policies would encourage public access and facilitate a more connected environment throughout the Tidelands. Based on the above, operations under the proposed the proposed PMPU would not physically divide an established community and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operational impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to the physical division of an established community.

For the most part, operations under Option 1 would involve similar activities as those described above, and would not introduce any new water or land uses that do not currently exist in the proposed PMPU area. Proposed adjustments to water and land use designations would not introduce any features, such as infrastructure, that would cut through or otherwise physically divide an established community. Option 1 would involve the permanent closure of a segment of Harbor Drive from Broadway to G Street in order to accommodate the Waterfront Destination Park at the foot of Navy Pier. While this would change vehicular circulation, it would not divide an established community because Option 1 would create a continuous connection with the existing parks in that area, such as the Lane Field Setback Park and Tuna Harbor Park. Therefore, operations under Option 1 would result in a less-than-significant impact and would not result in any additional or more severe impacts related to the physical division of an established community than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to physical division of an established community.

Operations under Option 2 would involve activities similar to those described above, and do not propose any new water or land uses that do not currently exist in the proposed PMPU area. Proposed adjustments to water and land use designations under this option would not introduce any features, such as new roadway alignments or other infrastructure, that would cut through or otherwise physically divide an established community. Therefore, operations under Option 2 would result in a less-than-significant impact and would not result in any additional or more severe impacts related to the physical division of an established community than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to the physical division of an established community.

Operations under Option 3 would involve activities similar to those described above, and do not propose any new water or land uses that do not currently exist in the proposed PMPU area. Proposed adjustments to water and land use designations and roadway improvements would not introduce any features, such as new roadways or other infrastructure, that would cut through or otherwise physically divide an established community. Option 3 would result in the realignment of Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street; however, this realignment would not cut through or otherwise physically divide an established community. Therefore, operations under Option 3 would result in a less-than-significant impact and would not result in any additional or more severe impacts related to the physical division of an established community than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

There are no proposed PMPU Element policies that would physically divide an established community.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not physically divide an established community. Impacts would be less than significant.

Threshold 2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact Analysis

Impacts of Water and Land

The following analysis considers whether the proposed PMPU would cause a significant environmental impact due to a conflict with any land use policy, plan, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, including the CCA, the Port Act, the Public Trust Doctrine, SANDAG's Regional Plan, and the ALUCPs for SDIA, NAS North Island, and NOLF I-Beach. This analysis considered the goals, objectives, and policies established within each element of

the proposed PMPU, as well as the water and land uses, special allowances, planned improvements and appealable projects, and standards proposed for each planning district.

As discussed in Section 4.9.3, *Laws, Regulations, Plans, and Policies*, the Port Act established that the District should develop, operate, maintain, control, regulate, and manage the Tidelands and required the District to create a master plan and establish allowable uses. Section 87, part (a), of the Port Act defines allowable uses that may occur on Tidelands. These include harbors and all necessary structures or appliances necessary, or convenient, for the promotion and accommodation or commerce and navigation; commercial and industrial uses; airport, heliport, or other aviation facilities, including runways, terminal buildings, roadways, etc.; highways, streets, roadways, bridges, belt line railroads, parking facilities, power, telephone, telegraph or cable lines or landings, water and gas pipelines, etc.; public buildings, public assembly and meeting places, convention centers, parks, playgrounds, bathhouses and bathing facilities, and golf courses; and small boat harbors and marinas, aquatic playgrounds and similar recreational facilities, restaurants, motels, launching ramps, storage sheds, boat repair facilities, administration buildings, public restrooms, bait and tackle shops, chandleries, boat sales establishments, service stations and fuel docks, yacht club buildings, parking areas, pedestrian ways, and landscaped areas.

The Public Trust Doctrine is ever-evolving, but uses generally include waterborne commerce, navigation, fisheries, open space, water-oriented recreation, ecological habitat protection, and other recognized public trust purposes. While Public Trust uses originally focused upon navigation, commerce, and fisheries, they have been interpreted to include a broad array of uses such as fishing, hunting, bathing, swimming, boating, anchoring, and general recreation. Trust lands may be devoted to purposes unrelated to the trust if such purposes are incidental to and accommodate trust uses. Although the Public Trust Doctrine is not a plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect, discussion of the doctrine is included in this analysis to demonstrate its role in developing acceptable water and land uses in the proposed PMPU. In accordance with the Port Act, the District is updating its existing PMP, which was certified by the CCC in 1981 and subsequently amended, with the proposed PMPU. The proposed PMPU includes the Water and Land Use Element, which is intended to guide the future water and land uses and development on Tidelands and was prepared in conformance and consistent with the CCA, Public Trust Doctrine, and Port Act. Specifically, as stated in WLU Policy 1.1.6, the Water and Land Use Element, establishes allowable water and land uses in accordance with six broad Public Trust-related categories:

- a. Commerce
- b. Environmental Stewardship
- c. Fisheries
- d. Navigation
- e. Recreation
- f. Government Facilities

As identified in PMPU Tables 3.1.2 and 3.1.3, the proposed PMPU establishes 9 water use designations and 10 land use designations, for which allowable use types or activities have been identified. These water and land use designations are in line with the six Port Act categories identified above. Water uses include:

- Anchorage

- Commercial Fishing Berthing
- Conservation/Intertidal
- Industrial and Deep-Water Berthing,
- Marine Services Berthing
- Navigation Corridor
- Open Bay/Water
- Recreational Berthing
- Sportfishing Berthing

Land uses include:

- Commercial Fishing
- Commercial Recreation
- Conservation Open Space
- Institutional/Roadways
- Marine Sales and Services
- Marine Terminal
- Maritime Services and Industrial
- Recreation Open Space
- Sportfishing
- Visitor-Serving Marine Terminal

The requirement for the creation of a port master plan that establishes a description of water and land uses is also included in the CCA, as is the requirement that a port master plan identify a list of appealable projects in sufficient detail to allow a determination of their consistency with the policies of Chapter 3 of the CCA. Chapter 5 of the proposed PMPU identifies a list of planned improvements for each planning district, including which of them qualify as appealable (also see Chapter 3, *Project Description*, for a list of appealable projects). In addition to the requirement of establishing water and land uses and appealable projects, many of the CCA policies are concerned with protection of coastal-dependent uses such as maritime uses, commercial and recreational fishing, and other water-based recreational activities along the waterfront; physical and visual access to coastal resources; and protection of natural resources. Other CCA policies address coastal access, including the relationship to vehicle parking. Specifically, the CCA stipulates that, where appropriate, public facilities, which includes parking, must be distributed throughout an area in order to mitigate against overcrowding and overuse of any single area.³ The CCA also stipulates that the location and amount of new development should maintain and enhance public access to the coast by providing adequate parking facilities or providing substitute means of serving the development with public

³ Section 30212.5 of the CCA indicates that wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

transportation.⁴ As detailed in Table 4.9-1, adherence to the proposed PMPU's policies and implementation of specific mitigation measures identified throughout this Draft PEIR would ensure that future development projects allowed under the proposed PMPU would not cause a significant environmental impact due to a conflict with the policies in Chapters 3 and 8 of the CCA.

As discussed under Section 4.9.3, the proposed PMPU area falls within the ALUCP review areas of three airports: SDIA, NAS North Island, and NOLF-I-B. Future development projects that would exceed the height criteria in Federal Aviation Regulations Part 77 would require project proponents to consult with the Federal Aviation Administration and the ALUC if the development would be located within Review Area 1 or meet the review requirements for Review Area 2, as described in Section 4.7, *Hazards and Hazardous Materials*. Proposed PMPU Element policies, including SR Policy 1.1.7, SR Policy 1.1.8, and SR Policy 1.1.9, would require future development projects within an ALUCP review area to be sited and designed to minimize potential safety risks. The policies would restrict development of any project that would cause hazards to air navigation or other uses that may interfere with airport operations. The District would be responsible for conducting a consistency review of discretionary and ministerial projects located within the AIAs after implementation of the ALUCPs (Section 6.2.3, *Regional Water and Land Use Compatibility*, of the proposed PMPU identifies the implementation process). This consistency review would ensure there would be no conflict with the ALUCPs.

Finally, SANDAG's Regional Plan established a long-range blueprint for the San Diego region's growth and development through the year 2050. As discussed more fully in Section 4.11, *Population & Housing*, the proposed PMPU would not include any components that would result in substantial unplanned population growth and therefore would be consistent with the 2050 RTP. In addition, the proposed PMPU would result in alterations to the circulation system in order to improve efficiency and reduce traffic (vehicle miles traveled) along the roadways; to provide infrastructure for transit opportunities, and pedestrians and bicyclists with improved travel routes; and to establish mobility hubs distributed throughout the Tidelands to meet the needs of the visitors to the proposed PMPU area, avoid any overcrowding and overuse of any single area, and maintain and enhance public access to the coast. These proposed additions would be consistent with the goals of SB 375 and SANDAG's Regional Plan (see Table 4.9-1 below).

Based on the above, the proposed PMPU would not cause a significant environmental impact due to a conflict with any plans, policies, or regulations adopted for the purposes of avoiding or mitigating an environmental effect. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU

⁴ Section 30252 of the CCA indicates that the location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to a conflict with a plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect.

For the most part, operations under Option 1 would involve activities similar to those described above and would not introduce any new water or land uses that do not currently exist in the proposed PMPU area. Option 1 would involve the permanent closure of a segment of Harbor Drive from Broadway to G Street in order to accommodate the Waterfront Destination Park at the foot of Navy Pier, which would change vehicular circulation in that area and could conflict with SANDAG policies related to reducing bottlenecks. However, as noted in Table 4.9-1, the Safety and Resiliency Element addresses the District's objective of ensuring safe access to, from, and throughout Tidelands. In addition, while the closure of this roadway would require the redistribution of vehicular traffic onto adjacent roadways, it would still allow for use by pedestrians, bicycles, and pedicabs, and would therefore increase multi-modal transportation options. Therefore, operations under Option 1 would result in a less-than-significant impact and would not result in any additional or more severe environmental impacts due to a conflict with plans, policies, and regulations adopted for the purposes of avoiding environmental effects than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to a conflict with a plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect.

Operations under Option 2 would involve activities similar to those described above and do not propose any new water or land uses that do not currently exist in the proposed PMPU area. Option 2 would be consistent the policies identified in Table 4.9-1. Therefore, operations under Option 2 would result in a less-than-significant impact and would not result in any additional or more severe environmental impacts due to a conflict with plans, policies, and regulations adopted for the purposes of avoiding environmental effects than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to a conflict with a plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect.

Operations under Option 3 would involve activities similar to those described above and do not propose any new water or land uses that do not currently exist in the proposed PMPU area. Option 3 would result in the realignment of Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street. This realignment would cause an impact to resources, as defined by CEQA, due to demolition of a portion of the County of San Diego Waterfront Park. However, this would not conflict with any of the policies identified in Table

4.9-1 below; therefore, this realignment would not conflict with any plans, policies, and regulations adopted for the purposes of avoiding environmental effects. Overall, Option 3 would be consistent the policies identified in Table 4.9-1. Therefore, operations under Option 3 would result in a less-than-significant impact and would not result in any additional or more severe environmental impacts related to a conflict with plans, policies, and regulations adopted for the purposes of avoiding environmental effects than buildout of the proposed PMPU without Option 3.

Table 4.9-1. Project Consistency with Relevant Goals, Objectives, and Policies

Goal, Policy, Objective	PMPU Consistency
California Coastal Act, Chapter 3, Coastal Resources Planning and Management Policies	
<p>Section 30210. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.</p>	<p>Consistent. As discussed in Chapter 3 of this Draft PEIR, the proposed PMPU includes policies and planned improvements, including appealable projects, that would improve mobility, increase recreational open space area, and enhance coastal access in the proposed PMPU area. Development would include wayfinding signage consistent with Chapter 4, <i>Baywide Development Standards</i>, of the proposed PMPU and other District signage guidelines. Additionally, the Ecology Element of the proposed PMPU contains policies that would protect sensitive natural resources, including ECO Policy 1.1.2 through ECO Policy 4.2.1 (see Section 4.3, <i>Biological Resources</i>, of this Draft PEIR).</p>
<p>Section 30211. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.</p>	<p>Consistent. The proposed PMPU would enhance access to the public realm and protect and provide access to Tidelands and waterside recreational facilities in accordance with the Water and Land Use Element of the proposed PMPU. In addition, coastal access and development standards are identified for each planning district, which include ways to increase direct access to the Bay by enhancing existing or adding new public docking area, small-craft launching points, or step-down areas to enable the public to touch the water.</p>
<p>Section 30212. (a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway. (b) For purposes of this section, "new development" does not include: (1) Replacement of any structure pursuant to the provisions of subdivision (g) of Section 30610.</p>	<p>Consistent. In accordance with WLU Goal 3 and subsequent policies, the proposed PMPU would enhance access to the water (or to the coast) and to the public realm through the implementation of a comprehensive open space network and enhancement of proximate connections to the water for the public and priority coastal uses. As outlined in WLU Policy 2.2.1, the District and its permittees would implement planned improvements and special allowances to facilitate public health, safety, and welfare and provide public coastal access and enjoyment of the waterfront. The proposed PMPU would require the District and its permittees to provide public coastal access in conjunction with future development projects and improvements. As discussed in</p>

Goal, Policy, Objective	PMPU Consistency
<p>(2) The demolition and reconstruction of a single-family residence; provided, that the reconstructed residence shall not exceed either the floor area, height or bulk of the former structure by more than 10 percent, and that the reconstructed residence shall be sited in the same location on the affected property as the former structure.</p> <p>(3) Improvements to any structure which do not change the intensity of its use, which do not increase either the floor area, height, or bulk of the structure by more than 10 percent, which do not block or impede public access, and which do not result in a seaward encroachment by the structure.</p> <p>(4) The reconstruction or repair of any seawall; provided, however, that the reconstructed or repaired seawall is not a seaward of the location of the former structure.</p> <p>(5) Any repair or maintenance activity for which the commission has determined, pursuant to Section 30610, that a coastal development permit will be required unless the commission determines that the activity will have an adverse impact on lateral public access along the beach.</p> <p>As used in this subdivision "bulk" means total interior cubic volume as measured from the exterior surface of the structure.</p> <p>(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.</p>	<p>Chapter 4 of the proposed PMPU, waterside promenades would be required as part of any development that abuts the waterfront and is not a coastal-dependent use. Additionally, development would be designed to integrate public access through the siting of walkways. Walkways would provide unobstructed physical access perpendicular to the waterfront, between the promenade and the public right-of-way.</p>
<p>Section 30212.5. Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.</p>	<p>Consistent. In accordance with Mobility Element Objective 1.2 and subsequent policies, the District would implement a series of interconnecting mobility hubs throughout the Tidelands. These mobility hubs would connect to water-based access points throughout the Bay, where feasible. Parking areas may be included in mobility hubs or as standalone facilities. The District would encourage the development of mobility hubs rather than surface parking to provide proximate connections to the water and Tidelands, where feasible. The development of this mobility hub network would enhance circulation and promote coastal access throughout Tidelands, reducing the potential for crowding or overuse of any single area. In addition, in accordance with Mobility Element Objective 1.3 and subsequent policies, the District would require permittees of future development projects to identify and secure vehicular parking sufficient to serve the development's use. Parking could be</p>

Goal, Policy, Objective	PMPU Consistency
<p>Section 30213. Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.</p> <p>The commission shall not: (1) require that overnight room rentals be fixed at an amount certain for any privately owned and operated hotel, motel, or other similar visitor-serving facility located on either public or private lands; or (2) establish or approve any method for the identification of low or moderate income persons for the purpose of determining eligibility for overnight room rentals in any such facilities.</p>	<p>provided through on-site parking, shared agreements with adjoining development, agreements with off-site parking facilities, and participation in the establishment of planned mobility improvements, including mobility hubs, etc. Per M Policy 1.3.5, the District would periodically monitor public parking demand on Tidelands to ensure that public spaces are being efficiently managed and used.</p> <p>Consistent. WLU Goal 6 and subsequent objectives and policies would expand the collection of lower cost visitor and recreational facilities available to the public. These include facilities such as parks and waterside amenities such as public fishing piers, launch areas for motorized and nonmotorized watercraft, and overnight accommodations. As discussed in the Environmental Justice Element of the proposed PMPU, development would provide a range of free and lower cost recreational facilities throughout Tidelands that are accessible to disadvantaged communities. Additionally, the District—or through CDPs issued by the District—would maintain and, where feasible, expand free and lower cost recreational facilities, such as recreational fishing, parks, or viewing piers, on Tidelands adjacent to Portside and Tidelands Border Communities. In accordance with the Economics Element, the District would continue to reinvest lease revenues to support financing and maintenance of public improvements in alignment with CCA obligations, including lower cost visitor serving and recreational facilities such as parks, promenades, public piers, and public art. In addition, PD2 and PD3 identify planned improvements that would include up to 1,720 lower cost overnight accommodations.</p>
<p>Section 30214. (a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:</p> <ol style="list-style-type: none"> (1) Topographic and geologic site characteristics. (2) The capacity of the site to sustain use and at what level of intensity. (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses. 	<p>Consistent. The proposed PMPU area is relatively flat, and topographic and geologic site characteristics would not hinder public access (see Section 4.5, <i>Geology and Soils</i>). Chapter 4 of the proposed PMPU establishes the requirements for waterside promenades as part of any future development project that abuts the waterfront and is not a coastal-dependent use, and planned improvements included throughout Chapter 5 of the proposed PMPU identify requirements for the provision or enhancement of public access and recreational areas. In accordance with WLU Policy 4.2.2, activating features within Recreation Open Space areas would be commensurate with the intensity of land uses within the permittee's development site. Fragile natural resources exist</p>

Goal, Policy, Objective	PMPU Consistency
<p>(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.</p> <p>(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution.</p> <p>(c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs.</p>	<p>within the PMPU area (see Section 4.3 of this Draft PEIR). Public access opportunities would increase with implementation of the proposed PMPU, and future development may be sited adjacent to sensitive habitats; however, implementation of mitigation measures would ensure these natural resources are protected (see Section 4.3). Additionally, ECO Policy 1.1.3 requires future development adjacent to conservation areas and other sensitive habitats to be coordinated, sited, and designed to avoid impacts where feasible or where legally required. If avoiding impacts is not feasible, or avoidance is not legally required, impacts must be mitigated.</p> <p>In addition, amenity zones may include fixed or movable seating, shade structures, site furnishings, trash receptacles, signage, and other visitor-serving amenities.</p>
<p>Section 30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.</p>	<p>Consistent. As discussed in WLU Objective 1.2, the proposed PMPU would identify each water and land use's functional dependency to the water, consistent with the CCA priorities (coastal-dependent, coastal-related, and coastal-enhancing). As discussed in WLU Policy 1.3.1, the District would prioritize allowable uses based on their location and functional dependency to the coast.</p>
<p>Section 30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.</p>	<p>Consistent. Planning District 8 is adjacent to oceanfront land suitable for recreational use within the District's jurisdiction. As identified in WLU Policy 5.1.3, all development shall be located, designed, and constructed to provide for other benefits consistent with the Public Trust, including improved recreational opportunities in the public realm, and Recreation Open Space on land adjacent to oceanfront areas suitable for recreational use and development.</p>
<p>Section 30222. The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.</p>	<p>Consistent. There are no private residential properties within the proposed PMPU area and no privately owned land. However, within PD9 there are piers and docks with no associated public access that extend into the Crown Isle Subdistrict and Grand Caribe Isle and South Cays Subdistrict from off-Tidelands private residences. These piers and docks connect directly to the residences with no ability to provide public access due to physical constraints. Additionally, quasi private/quasi-public piers exist within PD1, but as identified</p>

Goal, Policy, Objective	PMPU Consistency
	<p>under the <i>Special Allowances for the West Island Subdistrict</i> in the proposed PMPU, the piers must be accessible to the public from sunrise to sunset with clearly posted signs indicating the availability for public use. Only the gangways and docks of these piers may remain closed to the public. In addition, as identified in WLU Policy 5.1.3, all development shall be located, designed, and constructed to give highest priority to the use of existing land space in harbors for coastal-dependent port purposes, including, but not limited to, navigational facilities, shipping industries, and necessary support and access facilities.</p>
<p>Section 30222.5. Oceanfront land that is suitable for coastal dependent aquaculture shall be protected for that use, and proposals for aquaculture facilities located on those sites shall be given priority, except over other coastal dependent developments or uses.</p>	<p>Consistent. Planning District 8 contains oceanfront land suitable for coastal-dependent aquaculture within the District’s jurisdiction. Aquaculture is identified as an allowable primary or secondary use within all water use designations except for anchorage uses and navigation corridors. In addition, as identified in ECO Policy 2.1.4, aquaculture is encouraged in Tidelands areas using species and sustainable practices that are approved by the California Department of Fish and Wildlife and that do not degrade surrounding natural resources and minimize substantial environmental impacts.</p>
<p>Section 30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.</p>	<p>Consistent. The proposed PMPU would include landside development that would support coastal recreational uses. As stipulated in WLU Objective 1.2, the proposed PMPU identifies each land use’s functional dependency to the water, consistent with the CCA priorities (coastal-dependent, coastal-related, and coastal-enhancing). As discussed in WLU Policy 1.3.1, the District has prioritized allowable uses based on their location and functional dependency to the coast.</p>
<p>Section 30224. Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.</p>	<p>Consistent. Planned improvements identified for PD1, PD2, PD3, PD 9, and PD10 allow for an increase in recreational boat berthing area for a total of approximately 485 slips. Increased anchorage moorings are identified for most of these planning districts as well, which would increase to up 75 additional moorings under the proposed PMPU. The proposed PMPU would not interfere with existing water transportation routes (i.e., the ferry and water taxi) or the navigational channels of other users of the Bay.</p>
<p>Section 30230. Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a</p>	<p>Consistent. Marine resources within the proposed PMPU area would be impacted by implementation of the proposed PMPU; however, implementation of mitigation measures would ensure that species of special biological or economic significance are</p>

Goal, Policy, Objective	PMPU Consistency
<p>manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.</p>	<p>protected (see Section 4.3 of this Draft PEIR). In addition, the goals, objectives, and policies of the Ecology Element are devoted to the enhancement, conservation, restoration, and maintenance of biological resources, including through the establishment of buffers around sensitive habitat and wetland enhancement. The District would prioritize and pursue opportunities for the protection, conservation, restoration, and enhancement of sensitive habitats and State or Federally listed coastal species (ECO Policy 1.1.2); establish and maintain ecological buffers around sensitive habitats (ECO Policy 1.1.5); and identify locations throughout the Bay that could support habitat enhancement, restoration, and protection (ECO Policies 1.1.13, 1.1.15, 1.1.22, and 1.1.23). Furthermore, ECO Policy 1.1.3 requires future development adjacent to conservation areas and other sensitive habitats, such as riparian habitats and natural streams, to be coordinated, sited, and designed to avoid impacts where feasible or where legally required. If avoiding impacts is not feasible, or avoidance is not legally required, impacts must be mitigated. Mitigation measures have been identified to reduce any impacts the proposed PMPU may have on sensitive habitats (see Section 4.3 of this Draft PEIR).</p>
<p>Section 30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.</p>	<p>Consistent. The Ecology Element of the proposed PMPU identifies goals, objectives, and policies that focus on healthy ecosystems, a clean environment, and collaborative stewardship. ECO Policy 1.1.3 requires future development adjacent to conservation areas and other sensitive habitats, such as riparian habitats and natural streams, to be coordinated, sited, and designed to avoid impacts where feasible or where legally required. If avoiding impacts is not feasible, or avoidance is not legally required, impacts must be mitigated. As discussed in Section 4.8, <i>Hydrology and Water Quality</i>, PMPU policies would reduce potential impacts to violations of water quality by prioritizing the protection and enhancement of water quality (ECO Policy 2.1.1), committing to implementing initiatives to reduce copper loads from recreational vessels (ECO Policy 2.1.6) encouraging the use of alternative non-copper based antifouling paints (ECO Policy 2.1.7), committing to prioritizing and pursuing opportunities for the protection and enhancement of sediment quality (ECO Policy 2.2.1), reinforcing compliance with the MS4 permits and other legal requirements to minimize pollution impacts (ECO Policy 2.3.1), implementing measures to prevent</p>

Goal, Policy, Objective	PMPU Consistency
	<p>pollution impacts and adverse impacts from runoff flows from all development and maintenance activities (ECO Policy 2.3.4), and implementing measures to protect and improve water quality from development projects located in areas identified as impaired under Section 303 (d) of the Federal Clean Water Act (ECO Policy 2.3.5). Additionally, mitigation measures have been identified to ensure that implementation of the proposed PMPU would not adversely affect the marine environment (see Section 4.3 and Section 4.8 of this Draft PEIR.</p>
<p>Section 30232. Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.</p>	<p>Consistent. The PMPU does not propose any new or expanded oil, gas, petroleum facilities, or other new or expanded activities involving hazardous substances. However, future development under the proposed PMPU would be required to comply with all applicable regulations regarding spill prevention and handling of hazardous materials (see Sections 4.7 and 4.8 of this Draft PEIR). In addition, the District has developed an Emergency Operations Plan to address both natural and human-caused hazards and disasters, which would enable effective containment and cleanup for any accidental spills that may occur.</p>
<p>Section 30233. (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:</p> <ol style="list-style-type: none"> (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities. (2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps. (3) In open coastal waters, other than wetlands, including streams, estuaries, lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that would provide public access and recreational opportunities. (4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines. 	<p>Consistent. The proposed PMPU does not identify any planned improvements that would specifically require diking, filling, or dredging. However, should future development allowed under the proposed PMPU require the diking, filling, or dredging of open coastal waters, wetlands, or estuaries, in order to develop new and expanded port facilities, mitigation measures would be applied to minimize adverse environmental effects, as detailed in Sections 4.3, 4.7, 4.8, of this Draft PEIR.</p>

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<p>(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.</p> <p>(6) Restoration purposes.</p> <p>(7) Nature study, aquaculture, or similar resource dependent activities.</p>	<p>Consistent. The proposed PMPU does not identify any planned improvements that would specifically require dredging. However, should future development allowed under the proposed PMPU require dredging and spoils disposal, the proposed PMPU includes numerous policies directing the protection and marine and wildlife habitats. In addition, ECO Policy 2.3.3 requires development to remove contaminated fill or appropriately contain and remediate the fill. Furthermore, mitigation measures have been identified to ensure that dredging activities associated with future development occurring under implementation of the proposed PMPU would avoid significant disruption to marine and wildlife habitats (see Section 4.3 of this Draft PEIR).</p>
<p>(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.</p> <p>(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California," shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.</p> <p>For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or improved, where the improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.</p>	<p>Consistent. Except for a small area designated for roadway uses, PD7 would be designated for conservation/intertidal uses. However, future development occurring as part of implementation of the proposed PMPU may involve development within a wetland or estuary. Any alteration of coastal wetlands would be in conformance with the limitations identified by the California Department of Fish and Wildlife. In addition, should future development allowed under the proposed PMPU require the diking, filling, or dredging in existing wetlands or estuaries, appropriate mitigation measures would be identified at the time of site-specific review to minimize adverse environmental effects, as detailed in Section 4.3 of this Draft PEIR.</p>
<p>(d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients that would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been</p>	<p>Not applicable. The proposed PMPU would not involve development on a watercourse and would not implement erosion control or flood control facilities on a watercourse.</p>

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<p>provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for these purposes are the method of placement, time of year of placement, and sensitivity of the placement area.</p>	<p>Consistent. As detailed in ECON Policy 2.1.1, the District would maintain a mix of water and land uses that meet the need of established Tidelands industries and provide opportunities for emerging Public Trust-consistent uses. The proposed PMPU would allow for an increase of commercial fishing berthing by up to 65 slips (in PD1) and would allow an increase of up to 485 recreational boat berthing slips throughout the proposed PMPU area. Additionally, ECON Policy 2.3.11 states that the District would coordinate with commercial fishing, recreational fishing, and sportfishing operations to identify and prioritize facility improvements that benefit the fishing business community.</p>
<p>Section 30234. Facilities serving the commercial fishing and recreational boating industries shall be protected, and where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.</p>	<p>Consistent. The District intends to support commercial and recreational fishing. The economic, commercial, and recreational importance of fishing activities is described in ECON Policy 2.3.11 through ECON Policy 2.3.17 of the Economics Element. In addition, as noted above, the proposed PMPU would allow for an additional 65 commercial fishing berthing slips and an increase of up to 485 recreational boat berthing slips throughout the proposed PMPU area.</p>
<p>Section 30234.5. The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.</p>	<p>Consistent. Shoreline protective devices that may be implemented, as part of the proposed PMPU, could include revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes. In accordance with SR Policy 3.3.10, when constructing, reconstructing, expanding, or replacing a shoreline protective device (per SR Policy 3.3.3, SR Policy 3.3.6, and SR Policy 3.3.9), the District would require it be designed to minimize adverse impacts on local shoreline sand supply.</p>
<p>Section 30235. Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fishkills should be phased out or upgraded where feasible</p>	<p>Not Applicable. The proposed PMPU would not result in channelizations, dams, or other substantial alterations of rivers and streams.</p>
<p>Section 30236. Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.</p>	

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<p>Section 30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.</p>	<p>Consistent. ECO Policy 1.1.3 requires future development adjacent to conservation areas and other sensitive habitats, such as riparian habitats and natural streams, to be coordinated, sited, and designed to avoid impacts where feasible or where legally required. If avoiding impacts is not feasible, or avoidance is not legally required, impacts must be mitigated. Mitigation measures have been identified to reduce any impacts the proposed PMPU may have on those habitats (see Section 4.3 of this Draft PEIR).</p>
<p>Section 30241. The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following: (a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses. (b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development. (c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250. (d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands. (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality. (f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.</p>	<p>Not Applicable. There is no prime agricultural land within the proposed PMPU area.</p>
<p>Section 30241.5. (a) If the viability of existing agricultural uses is an issue pursuant to subdivision (b) of Section 30241 as to any local coastal program or amendment to any certified local coastal program submitted for review and approval under this division, the determination of "viability" shall include, but not be limited to, consideration of an economic feasibility evaluation containing at least both of the following elements: (1) An analysis of the gross revenue from the agricultural products grown</p>	<p>Not Applicable. The proposed PMPU would not involve existing agricultural uses.</p>

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<p>in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program. (2) An analysis of the operational expenses, excluding the cost of land, associated with the production of the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program. For purposes of this subdivision, "area" means a geographic area of sufficient size to provide an accurate evaluation of the economic feasibility of agricultural uses for those lands included in the local coastal program or in the proposed amendment to a certified local coastal program. (b) The economic feasibility evaluation required by subdivision (a) shall be submitted to the commission, by the local government, as part of its submittal of a local coastal program or an amendment to any local coastal program. If the local government determines that it does not have the staff with the necessary expertise to conduct the economic feasibility evaluation, the evaluation may be conducted under agreement with the local government by a consultant selected jointly by local government and the executive director of the commission.</p>	
<p>Section 30242. All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.</p>	<p>Not Applicable. The proposed PMPU would not involve the conversion of agricultural land.</p>
<p>Section 30243. The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.</p>	<p>Not Applicable. There are no commercial timberlands within the proposed PMPU area.</p>
<p>Section 30244. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.</p>	<p>Consistent. As discussed in Sections 4.4, <i>Cultural Resources</i>, and 4.5, <i>Geology and Soils</i>, the proposed PMPU area may contain archaeological or paleontological resources. However, appropriate mitigation measures have been identified in Sections 4.4 and 4.5, which would be implemented by future development in order to reduce potential impacts on these resources.</p>
<p>Section 30250. (a) New residential, commercial, or industrial development, except as otherwise</p>	<p>Consistent. The proposed PMPU area would be adjacent and contiguous to an existing urbanized</p>

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provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels. (b) Where feasible, new hazardous industrial development shall be located away from existing developed areas. (c) Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attraction for visitors.

Section 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30252. The location and amount of new development should maintain and enhance public access to the coast by
(1) facilitating the provision or extension of transit service

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and developed area, and all planned improvements, including commercial or industrial development or visitor-serving uses, would occur within already developed areas. ECO Policy 1.1.3 requires any future development adjacent to conservation areas and other sensitive habitats, such as riparian habitats and natural streams, to be coordinated, sited, and designed to avoid impacts where feasible or where legally required. If avoiding impacts is not feasible, or avoidance is not legally required, impacts must be mitigated. The proposed PMPU area is adequately served by existing public services (see Section 4.12, *Public Services and Recreation*). The proposed PMPU would not involve the division of land.

Consistent. The proposed PMPU identifies scenic vistas and view corridor extensions that must be protected. In addition, the proposed PMPU employs goals, policies, and objectives as well as development standards to ensure the protection of the visual resources throughout the proposed PMPU area. Specifically, WLU Objective 2.2 requires development to be implemented in a manner that blends with and enhances the surrounding character and qualities. WLU Policy 3.2.1 requires that visual access locations (scenic vista areas, view corridor extensions, Window to the Bay, and walkways) be maintained and protected, as shown on the *Planning Districts: Coastal Access Views and Pathways Maps* in Chapter 5 of the proposed PMPU. In addition, baywide development standards established in Chapter 4 of the PMPU, as well as development standards established for each planning district in Chapter 5, identify height limits and setback requirements, etc., to maintain visual quality throughout the proposed PMPU area. As discussed in Section 4.1, *Aesthetics and Visual Resources*, of this Draft PEIR the proposed PMPU would not degrade the visual quality of the proposed PMPU area and would be visually compatible with the character of the surrounding areas.

Consistent. The proposed PMPU would implement mobility hubs throughout the PMPU area, which would connect to the overall system through land-based transit (the District's bayfront circulator and other transit options) and water-based transit (ferries and water taxis).

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(2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads	Not Applicable. Per the Public Trust Doctrine, residential uses are not allowed within the Tidelands, and the proposed PMPU would not provide new commercial facilities within or adjoining residential development.
(3) providing non-automobile circulation within the development	Consistent. The proposed PMPU would implement mobility hubs throughout the proposed PMPU area, which would provide connections to bicycle and pedestrian facilities and amenities. Pedestrian connections would be provided adjacent to visitor attractions and uses that are located within 0.25 mile of a Regional Mobility Hub. Connections would be provided to an onsite or adjacent regional bicycle facility, such as a Class I Multi-Use Path or a Class IV Cycle Track. Additionally, bicycle parking and wayfinding signage to key destinations would be provided at each Regional Mobility Hub.
(4) providing adequate parking facilities or providing substitute means of serving the development with public transportation	Consistent. Transit services that serve Tidelands include local and express buses, a trolley, heavy passenger rail, and commuter rail. In accordance with Mobility Objective 1.2 in the Mobility Element and subsequent policies, the District would implement a series of interconnecting mobility hubs throughout the Tidelands. Regional Mobility Hubs would provide a direct connection to a regional transit stop, such as a trolley or bus stop, and a bayfront circulator stop. Additionally, these mobility hubs would connect to water-based access points throughout the Bay, where feasible. Parking areas may be included in mobility hubs or as standalone facilities. The District would encourage the development of mobility hubs rather than surface parking to provide proximate connections to the water and Tidelands, where feasible. The development of the mobility hub network and extension of the baywide circulator, combined with existing public transportation options, would provide substitute means of serving the development with public transportation. In addition, in accordance with Mobility Element Objective 1.3 and subsequent policies, the District would require permittees of future development to identify and secure vehicular parking sufficient to serve the development's use. Parking could be provided through on-site parking, shared agreements with adjoining development, agreements with off-site parking facilities, and participation in the establishment of planned mobility improvements, including mobility hubs, etc. Per M Policy 1.3.5, the District would periodically monitor public parking demand on Tidelands to ensure that public spaces are being efficiently managed and used.

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	<p>Additionally, in accordance with Mobility Objective 1.3 and subsequent policies, the District would provide public parking to meet evolving demands. The District will seek to balance the competing demands of the CCA for adequate parking with those of SB 743 and related laws and regulations to reduce GHG emissions. Permittees of development that generated parking demand would be required to identify and secure, as appropriate, vehicular parking sufficient to serve that development's specific use without relying upon or reducing existing vehicular spaces dedicated to public uses and when alternative mobility modes that offset the need for parking are not feasible or sufficient to meet total parking demand (Mobility Policy 1.3.4). The District would also periodically monitor the public parking demand on Tidelands to ensure that public spaces are being efficiently managed and used and to review and update the District's parking guidelines, as necessary (Mobility Policy 1.3.5).</p>
<p>(5) assuring the potential for public transit for high intensity uses such as high-rise office buildings</p>	<p>Consistent. Due to its proximity to existing public transit facilities, the proposed PMPU would assure public transit options within the proposed PMPU area.</p>
<p>(6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.</p>	<p>Consistent. Residential development on District Tidelands is prohibited by the Public Trust Doctrine and Port Act and is not being proposed. The proposed PMPU would not involve residential development and would not increase the residential population in the project vicinity. (See Section 4.11, <i>Population & Housing</i>.) The proposed PMPU would increase public access opportunities to the waterfront.</p>
<p>Section 30253. New development shall do all of the following: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.</p>	<p>Consistent. The District will review future development allowed under the proposed PMPU to minimize risks to life and property due to geologic, flood, or fire hazards (see Sections 4.5, 4.7, 4.8 of this Draft PEIR). Future development allowed under the proposed PMPU would be required to comply with all applicable laws and regulations, including the building codes identified in Section 4.5, and would restrict development within Alquist-Priolo Zones or other areas where active faults are known. All future development would be sited at least 50 feet away from an active fault, in accordance with the Alquist-Priolo Act. Moreover, the proposed PMPU includes SR Policy 1.1.6, which requires compliance with the seismic safety standards of all applicable seismic provisions and criteria in the most recent version of California State and applicable municipal codes and the</p>

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	<p>incorporation of siting and design techniques to address any such geologic hazards. As discussed in Section 4.7 of this Draft PEIR, there are numerous hazardous materials and hazardous waste laws and regulations that would apply to future development projects within the proposed PMPU area. Specifically, the Federal Department of Transportation (DOT) Hazardous Materials Regulations (49 Code of Federal Regulations [CFR] 100–185) Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 173 (Packaging Requirements), 177 (Highway Transportation), 178 (Packaging Specifications), and 180 (Packaging Maintenance) would reduce impacts associated with transportation of hazardous materials. The Spill Prevention, Control, and Countermeasure (SPCC) Plan (40 CFR 112.7) enforced by County Department of Environmental Health (DEH) would reduce impacts associated with spills of fuel or oil to navigable waters. Federal Occupational Safety and Health Administration (OSHA) requirements would reduce impacts related to workers' exposure to hazardous materials at the workplace. California Code of Regulations (CCR) Title 8 and Title 22 would reduce potential impacts related to the handling of hazardous materials and management of hazardous materials facilities, as well as the testing, abatement, and disposal of asbestos-containing materials (ACMs) and lead-based paint (LBP). For detailed explanation of the applicable regulations, see Section 4.7.3. Furthermore, new buildings would be designed to avoid inundation from flooding per Federal Emergency Management Agency (FEMA) regulations, which require that future structures proposed within a flood zone must be designed to ensure that the floor elevation is raised at least 1 foot above the floodplain elevation and meets the structural requirements of FEMA to avoid any damage to persons or structures as a result of a 100-year flood. Future projects would be subject to site-specific review to minimize risks to life and property due to geologic, flood, or fire hazards.</p>
<p>(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.</p>	<p>Consistent. The proposed PMPU area contains a human-made shoreline and is not located along a bluff or cliff, and no natural landforms would be altered by the future development occurring under the proposed PMPU.</p>

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(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.	Consistent. The proposed PMPU proposes numerous policies for reducing air pollution emissions, including ECO Policy 3.1.2, which requires permittees to implement clear air action measures, ECO Policy 3.1.3, which involves advancing maritime clean air strategies to help improve local air quality, ECO Policy 3.1.4, which requires permittees to implement infrastructure and clean vessel technologies, and ECO Policy 3.1.5, which directs the District to explore financing programs in coordination with regional, State, and Federal partners to implement recommended clean air measures. In addition, as described in Section 4.2, <i>Air Quality and Health Risk</i> , mitigation measures have been identified to reduce potential air quality impacts of future development and to be consistent with applicable requirements of the San Diego Air Pollution Control District (SDAPCD) and the California Air Resources Board (CARB).
(d) Minimize energy consumption and vehicle miles traveled.	Consistent. The proposed PMPU includes numerous policies targeting reduction in energy consumption, including, but not limited to, SR Policy 3.1.1, SR Policy 3.1.2, and SR Policy 3.1.3. In addition, the PMPU proposes implementation of new mobility hubs and roadway modifications to increase multi-modal transportation options, including increased use of transit as well as improved bicycle and pedestrian accessibility. Finally, the proposed PMPU would comply with San Diego Unified Port District Climate Action Plan Measures (MM-AQ-6), which require energy efficient design features that exceed 2019 Title 24 California Building Energy Efficiency Standards. As noted above, the proposed PMPU would be located proximal to public transit services. However, as documented in Section 4.14, <i>Transportation, Circulation, and Mobility</i> , the proposed PMPU is anticipated to result in an increase in vehicle miles traveled (VMT) from certain uses in PD2, PD3, PD8, PD9, and PD10. As such, mitigation has been identified that would require the District to establish a transportation impact fee program for the funding of transportation infrastructure improvements that would reduce VMT (MM-TRA-1), require future development projects to contribute fair share impact fees (MM-TRA-2), and require future development projects to implement Transportation Demand Management Plans (MM-TRA-3), which would minimize energy consumption and reduce VMT.
(e) Where appropriate, protect special communities and neighborhoods that, because of their unique	Consistent. The proposed PMPU organizes planning districts by subdistricts, as necessary, to

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<p>characteristics, are popular visitor destination points for recreational uses.</p>	<p>differentiate their distinct character (WLU Policy 2.1.2) and requires new development to be implemented in a manner that is compatible with and enhances the surrounding character and qualities (WLU Objective 2.2). In order to maintain a planning district's distinct character, all development is required to be in accordance with the associated subdistrict vision or planning district vision (WLU Policy 2.2.2), thus protecting the unique characteristics of special communities.</p>
<p>Section 30254. New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.</p>	<p>Not applicable. The proposed PMPU does not involve development near State Highway Route 1 in rural areas of the coastal zone.</p>
<p>Section 30254.5. Notwithstanding any other provision of law, the commission may not impose any term or condition on the development of any sewage treatment plant which is applicable to any future development that the commission finds can be accommodated by that plant consistent with this division. Nothing in this section modifies the provisions and requirements of Sections 30254 and 30412.</p>	<p>Not applicable. The proposed PMPU does not involve development of sewage treatment plants.</p>
<p>Section 30255. Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.</p>	<p>Consistent. Per WLU Objective 1.2, the proposed PMPU identifies each land use's functional dependency to the water, consistent with the CCA priorities (coastal-dependent, coastal-related, and coastal-enhancing). As discussed in WLU Policy 1.3.1, the District would prioritize allowable uses based on their location and functional dependency to the coast. In addition, future development would be required to establish and maintain ecological buffers of 100 feet between the landside development and saltmarsh to preserve and protect the wetland habitat for the anticipated life of the development (ECO Policy 1.1.5).</p>

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<p>Section 30260. Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible.</p>	<p>Consistent. In accordance with ECON Policy 2.3.4, the District would provide coastal-dependent and coastal-related industrial leasing opportunities to support the maritime and marine industry on the Tidelands. Additionally, the District would examine the redevelopment of underused commercial and industrial water and land areas for established and emerging coastal-dependent industries (ECON Policy 3.1.1). As documented throughout this Draft PEIR, future development would be required to mitigate potential environmental effects.</p>
<p>Section 30261. Multicompany use of existing and new tanker facilities shall be encouraged to the maximum extent feasible and legally permissible, except where to do so would result in increased tanker operations and associated onshore development incompatible with the land use and environmental goals for the area. New tanker terminals outside of existing terminal areas shall be situated as to avoid risk to environmentally sensitive areas and shall use a monobuoy system, unless an alternative type of system can be shown to be environmentally preferable for a specific site. Tanker facilities shall be designed to (1) minimize the total volume of oil spilled, (2) minimize the risk of collision from movement of other vessels, (3) have ready access to the most effective feasible containment and recovery equipment for oil spills, and (4) have onshore de-ballasting facilities to receive any fouled ballast water from tankers where operationally or legally required.</p>	<p>Not applicable. The proposed PMPU does not involve the development of new tanker facilities.</p>
<p>Section 30262. a) Oil and gas development shall be permitted in accordance with Section 30260, if the following conditions are met: (1) The development is performed safely and consistent with the geologic conditions of the well site. (2) New or expanded facilities related to that development are consolidated, to the maximum extent feasible and legally permissible, unless consolidation will have adverse environmental consequences and will not significantly reduce the number of producing wells, support facilities, or sites required to produce the reservoir economically and with minimal environmental impacts. (3) Environmentally safe and feasible subsea completions are used when drilling platforms or islands would substantially degrade coastal visual qualities unless use of those structures will result in substantially less environmental risks. (4) Platforms or islands will</p>	<p>Not applicable. The proposed PMPU does not involve oil and gas development.</p>

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<p>not be sited where a substantial hazard to vessel traffic might result from the facility or related operations, as determined in consultation with the United States Coast Guard and the Army Corps of Engineers. (5) The development will not cause or contribute to subsidence hazards unless it is determined that adequate measures will be undertaken to prevent damage from such subsidence. (6) With respect to new facilities, all oilfield brines are reinjected into oil-producing zones unless the Division of Oil and Gas, Geothermal Resources of the Department of Conservation determines to do so reduce environmental risks. Exceptions to reinjections will be granted consistent with the Ocean Waters Discharge Plan of the State Water Resources Control Board and where adequate provision is made for the elimination of petroleum odors and water quality problems. (7)(A) All oil produced offshore California shall be transported onshore by pipeline only. The pipelines used to transport this oil shall utilize the best achievable technology to ensure maximum protection of public health and safety and of the integrity and productivity of terrestrial and marine ecosystems. (B) Once oil produced offshore California is onshore, it shall be transported to processing and refining facilities by pipeline. (C) The following guidelines shall be used when applying subparagraphs (A) and (B): (i) "Best achievable technology," means the technology that provides the greatest degree of protection taking into consideration both of the following: (I) Processes that are being developed, or could feasibly be developed, anywhere in the world, given overall reasonable expenditures on research and development. (II) Processes that are currently in use anywhere in the world. This clause is not intended to create any conflicting or duplicative regulation of pipelines, including those governing the transportation of oil produced from onshore reserves. (ii) "Oil" refers to crude oil before it is refined into products, including gasoline, bunker fuel, lubricants, and asphalt. Crude oil that is upgraded in quality through residue reduction or other means shall be transported as provided in subparagraphs (A) and (B). (iii) Subparagraphs (A) and (B) shall apply only to new or expanded oil extraction operations. "New extraction operations" means production of offshore oil from leases that did not exist or had never produced oil, as of January 1, 2003, or from platforms, drilling island, subsea completions, or onshore drilling sites, that did not exist as of January 1, 2003. "Expanded oil extraction" means an increase in the geographic extent of</p>	

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<p>existing leases or units, including lease boundary adjustments, or an increase in the number of well heads, on or after January 1, 2003. (iv) For new or expanded oil extraction operations subject to clause (iii), if the crude oil is so highly viscous that pipelining is determined to be an infeasible mode of transportation, or where there is no feasible access to a pipeline, shipment of crude oil may be permitted over land by other modes of transportation, including trains or trucks, which meet all applicable rules and regulations, excluding any waterborne mode of transport. (8) If a state of emergency is declared by the Governor for an emergency that disrupts the transportation of oil by pipeline, oil may be transported by a waterborne vessel, if authorized by permit, in the same manner as required by emergency permits that are issued pursuant to Section 30624. (9) In addition to all other measures that will maximize the protection of marine habitat and environmental quality, when an offshore well is abandoned, the best achievable technology shall be used. b) Where appropriate, monitoring programs to record land surface and near-shore ocean floor movements shall be initiated in locations of new large-scale fluid extraction on land or near shore before operations begin and shall continue until surface conditions have stabilized. Costs of monitoring and mitigation programs shall be borne by liquid and gas extraction operators. c) Nothing in this section shall affect the activities of any state agency that is responsible for regulating the extraction, production, or transport of oil and gas.</p>	
<p>Section 30263. (a) New or expanded refineries or petrochemical facilities not otherwise consistent with the provisions of this division shall be permitted if (1) alternative locations are not feasible or are more environmentally damaging; (2) adverse environmental effects are mitigated to the maximum extent feasible; (3) it is found that not permitting such development would adversely affect the public welfare; (4) the facility is not located in a highly scenic or seismically hazardous area, on any of the Channel Islands, or within or contiguous to environmentally sensitive areas; and (5) the facility is sited so as to provide a sufficient buffer area to minimize adverse impacts on surrounding property. (b) New or expanded refineries or petrochemical facilities shall minimize the need for once-through cooling by using air cooling to the maximum extent feasible and by using treated waste waters from inplant processes where feasible.</p>	<p>Not applicable. The proposed PMPU does not involve new or expanded refineries or petrochemical facilities.</p>

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<p>Section 30264. Notwithstanding any other provision of this division, except subdivisions (b) and (c) of Section 30413, new or expanded thermal electric generating plants may be constructed in the coastal zone if the proposed coastal site has been determined by the State Energy Resources Conservation and Development Commission to have greater relative merit pursuant to the provisions of Section 25516.1 than available alternative sites and related facilities for an applicant's service area which have been determined to be acceptable pursuant to the provisions of Section 25516.</p>	<p>Not applicable. The proposed PMPU does not involve new or expanded thermal electric generating plants.</p>
<p>Section 30265. The Legislature finds and declares all of the following: (a) Transportation studies have concluded that pipeline transport of oil is generally both economically feasible and environmentally preferable to other forms of crude oil transport. (b) Oil companies have proposed to build a pipeline to transport offshore crude oil from central California to southern California refineries, and to transport offshore oil to out-of-state refiners. (c) California refineries would need to be retrofitted if California offshore crude oil were to be used directly as a major feedstock. Refinery modifications may delay achievement of air quality goals in the southern California air basin and other regions of the state. (d) The County of Santa Barbara has issued an Oil Transportation Plan which assesses the environmental and economic differences among various methods for transporting crude oil from offshore California to refineries. (e) The Governor should help coordinate decisions concerning the transport and refining of offshore oil in a manner that considers state and local studies undertaken to date, that fully addresses the concerns of all affected regions, and that promotes the greatest benefits to the people of the state.</p>	<p>Not applicable. The proposed PMPU does not involve pipeline transport of oil or the construction of refineries.</p>
<p>Section 30265.5. (a) The Governor, or the Governor's designee, shall coordinate activities concerning the transport and refining of offshore oil. Coordination efforts shall consider public health risks, the ability to achieve short- and long-term air emission reduction goals, the potential for reducing California's vulnerability and dependence on oil imports, economic development and jobs, and other factors deemed important by the Governor, or the Governor's designees. (b) The Governor, or the Governor's designee, shall work with state and local agencies, and the public, to facilitate the transport and refining of offshore oil in a manner which will promote the greatest public health and environmental and economic benefits to the people of the State. (c) The Governor, or the Governor's</p>	<p>Not applicable. The proposed PMPU does not involve the transport or refining of offshore oil.</p>

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<p>designee, shall consult with any individual or organization having knowledge in this area, including, but not limited to, representatives from the following: (1) State Energy Resources Conservation and Development Commission (2) State Air Resources Board (3) California Coastal Commission (4) Department of Fish and Game (5) State Lands Commission (6) Public Utilities Commission (7) Santa Barbara County (8) Santa Barbara County Air Pollution Control District (9) Southern California Association of Governments (10) South Coast Air Quality Management Districts (11) Oil industry (12) Public interest groups (13) United States Department of the Interior (14) United States Department of Energy (15) United States Environmental Protection Agency (16) National Oceanic and Atmospheric Administration (17) United States Coast Guard (d) This act is not intended, and shall not be construed, to decrease, duplicate, or supersede the jurisdiction, authority, or responsibilities of any local government, or any state agency or commission, to discharge its responsibilities concerning the transportation and refining of oil.</p>	
California Coastal Act, Chapter 8, Ports	
<p>Section 30700. For purposes of this division, notwithstanding any other provisions of this division except as specifically stated in this chapter, this chapter shall govern those portions of the Ports of Hueneme, Long Beach, Los Angeles, and San Diego Unified Port District located within the coastal zone, but excluding any wetland, estuary, or existing recreation area indicated in Part IV of the coastal plan.</p>	<p>Consistent. Chapter 8 of the CCA includes policies 30700 through 30721, and as documented below, the proposed PMPU would be consistent with Chapter 8 of the CCA.</p>
<p>Section 30701. The Legislature finds and declares that: (a) The ports of the State of California, including the Humboldt Bay Harbor, Recreation, and Conservation District, constitute one of the state's primary economic and coastal resources and are an essential element of the national maritime industry. (b) The location of the commercial port districts within the State of California, including the Humboldt Bay Harbor, Recreation, and Conservation District, are well established, and for many years such areas have been devoted to transportation and commercial, industrial, and manufacturing uses consistent with federal, state and local regulations. Coastal planning requires no change in the number or location of the established commercial port districts. Existing ports, including the Humboldt Bay Harbor, Recreation, and Conservation District, shall be encouraged to modernize and construct</p>	<p>Consistent. Implementation of the proposed PMPU would modernize and construct necessary facilities within the Tidelands in order to minimize or eliminate the necessity for future dredging and filling to create new ports in new areas of the State.</p>

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<p>necessary facilities within their boundaries in order to minimize or eliminate the necessity for future dredging and filling to create new ports in new areas of the state.</p>	<p>Consistent. As documented throughout this table and the discussion above, the proposed PMPU considers the policies of the State with respect to proposed port-related developments.</p>
<p>Section 30702. For purposes of this division, the policies of the state with respect to providing for port-related developments consistent with coastal protection in the port areas to which this chapter applies, which require no commission permit after certification of a port master plan and which, except as provided in Section 30715, are not appealable to the commission after certification of a master plan, are set forth in this chapter.</p>	<p>Consistent. As detailed in ECON Policy 2.1.1, the District would maintain a mix of water and land uses that meet the need of established Tidelands industries and provide opportunities for emerging Public Trust-consistent uses. Existing commercial fishing and recreational boating berthing space would increase under the proposed PMPU by 15 slips and 485 slips, respectively. Additionally, proposed recreational boating facilities in Tidelands would, to the extent feasible, be designed and located in such a fashion so as not to interfere with the needs of the commercial fishing industry (WLU Policy 4.3.5).</p>
<p>Section 30703. The California commercial fishing industry is important to the State of California; therefore, ports shall not eliminate or reduce existing commercial fishing harbor space, unless the demand for commercial fishing facilities no longer exists or adequate alternative space has been provided. Proposed recreational boating facilities within port areas shall, to the extent it is feasible to do so, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.</p>	<p>Consistent. The proposed PMPU does not identify any planned improvements that would specifically require diking, filling, or dredging. However, should future development occur as part of the proposed PMPU that requires the diking, filling, or dredging of open coastal waters, wetlands, or estuaries, in order to develop new and expanded port facilities, this would only occur only when there is no feasible or less environmentally damaging alternative. In addition, mitigation measures have been identified, which would be implemented by future development to minimize potential adverse environmental effects as detailed in Sections 4.3, 4.7, and 4.8 of this Draft PEIR.</p>
<p>Section 30705. (a) Water areas may be diked, filled, or dredged when consistent with a certified port master plan only for the following: (2) New or expanded facilities or waterfront land for port-related facilities. (3) New or expanded commercial fishing facilities or recreational boating facilities. (4) Incidental public service purposes, including, but not limited to, burying cables or pipes or inspection of piers and maintenance of existing intake and outfall lines. (5) Mineral extraction, including sand for restoring beaches, except in biologically sensitive areas. (6) Restoration purposes or creation of new habitat areas. (7) Nature study, mariculture, or similar resource-dependent activities. (8) Minor fill for improving shoreline appearance or public access to the water. (b) The design and location of new or expanded facilities shall, to the extent practicable, take advantage of existing water depths, water circulation, siltation patterns, and means available to reduce controllable sedimentation so as to diminish the need for future dredging. (c) Dredging shall be planned, scheduled, and carried out to minimize disruption to fish and bird breeding and migrations, marine habitats, and water circulation. Bottom sediments or sediment elutriate shall be analyzed for toxicants prior to dredging or mining, and where</p>	

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<p>water quality standards are met, dredge spoils may be deposited in open coastal water sites designated to minimize potential adverse impacts on marine organisms, or in confined coastal waters designated as fill sites by the master plan where such spoil can be isolated and contained, or in fill basins on upland sites. Dredge material shall not be transported from coastal waters into estuarine or fresh water areas for disposal. (d) For water areas to be diked, filled, or dredged, the commission shall balance and consider socioeconomic and environmental factors.</p>	
<p>Section 30706. In addition to the other provisions of this chapter, the policies contained in this section shall govern filling seaward of the mean high tide line within the jurisdiction of ports:</p> <p>(a) The water area to be filled shall be the minimum necessary to achieve the purpose of the fill. (b) The nature, location, and extent of any fill, including the disposal of dredge spoils within an area designated for fill, shall minimize harmful effects to coastal resources, such as water quality, fish or wildlife resources, recreational resources, or sand transport systems, and shall minimize reductions of the volume, surface area, or circulation of water. (c) The fill is constructed in accordance with sound safety standards which will afford reasonable protection to persons and property against the hazards of unstable geologic or soil conditions or of flood or storm waters. (d) The fill is consistent with navigational safety.</p>	<p>Consistent. The proposed PMPU does not identify any planned improvements that would specifically require diking, filling, or dredging. However, should future development occur as part of the proposed PMPU that requires the diking, filling, or dredging of open coastal waters, wetlands, or estuaries, in order to develop new and expanded port facilities, this would only occur when there is no feasible or less environmentally damaging alternative. In addition, compliance with appropriate water quality regulations and implementation of mitigation measures would ensure the future development does not adversely affect open water habitat function, water quality, wildlife resources, or water circulation, as detailed in Sections 4.3 and 4.8 of this Draft PEIR.</p>
<p>Section 30707. New or expanded tanker terminals shall be designed and constructed to do all of the following: (a) Minimize the total volume of oil spilled. (b) Minimize the risk of collision from movement of other vessels. (c) Have ready access to the most effective feasible oil spill containment and recovery equipment. (d) Have onshore deballasting facilities to receive any fouled ballast water from tankers where operationally or legally required.</p>	<p>Not applicable. The proposed PMPU does not involve the construction of new or expanded tanker terminals.</p>
<p>Section 30708. All port-related developments shall be located, designed, and constructed so as to:</p> <p>(a) Minimize substantial adverse environmental impacts.</p> <p>(b) Minimize potential traffic conflicts between vessels.</p>	<p>Consistent. As documented throughout this Draft PEIR, the proposed PMPU would minimize substantial adverse environmental impacts through the implementation of mitigation measures and PMPU policies.</p> <p>Consistent. Projects involving future development of waterside uses would be designed in coordination with the District’s Maritime Department and the San Diego Bay Pilots Association to ensure that operation of expanded marinas would not adversely affect existing navigation routes for water taxi/ ferries, shipping vessels, cruise ships, military vessels, recreational</p>

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(c) Give the highest priority to the use of existing land space within harbors for port purposes, including, but not limited to, navigational facilities, shipping industries, and necessary support and access facilities.	boats, etc. Additionally, the Harbor Safety Plan provides mariners with specific information on key issues and initiatives that affect vessel safety in San Diego Bay. The use of the Harbor Safety Plan, in conjunction with required vessel navigation and safety standards, would minimize potential traffic conflicts between vessels. Consistent. As discussed in WLU Objective 1.2, the proposed PMPU would identify each land use’s functional dependency to the water, consistent with the CCA priorities (coastal-dependent, coastal-related, and coastal-enhancing). As discussed in WLU Policy 1.3.1, the District would prioritize allowable uses based on their location and functional dependency to the coast. The <i>TAMT Redevelopment Plan</i> includes a variety of infrastructure investments that may be undertaken over the long term to accommodate an increase of the terminal’s capabilities and capacity (Resolution 2016-200; UPD# EIR-2015-39; SCH# 2015031046; Clerk Document No. 66093). Other ship building activities in PD4 could potentially continue through the life of the proposed PMPU. The proposed PMPU does not change the area designated with marine-related industrial uses in any substantive way that would preclude the continued operation of these uses.
(d) Provide for other beneficial uses consistent with the public trust, including, but not limited to, recreation and wildlife habitat uses, to the extent feasible.	Consistent. As identified in WLU Policy 5.1.3, all development shall be located, designed, and constructed to provide for other benefits consistent with the Public Trust, including improved recreational opportunities in the public realm, such as Recreation Open Space that is adjacent to the water’s edge, or the conservation of adjacent wildlife habitat areas.
(e) Encourage rail service to port areas and multicompany use of facilities.	Consistent. Transit services that serve Tidelands include local and express buses, a trolley, heavy passenger rail, and commuter rail. In accordance with Mobility Objective 1.2 and subsequent policies, the District would implement a series of interconnecting mobility hubs throughout the Tidelands. Regional Mobility Hubs would provide a direct connection to a regional transit stop, such as a trolley stop or bus stop, and a bayfront circulator stop. In addition, freight rail services are provided to the working waterfront areas, largely by BNSF Railways. Furthermore, the TAMT Redevelopment Plan includes a Demolition and Initial Rail Component, which includes on-terminal rail upgrades that would encourage rail use at TAMT to provide rail service to port areas and multicompany use of facilities.

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<p>Section 30710. Within 90 days after January 1, 1977, the commission shall, after public hearing, adopt, certify, and file with each port governing body a map delineating the present legal geographical boundaries of each port's jurisdiction within the coastal zone. The Commission shall, within such 90-day period, adopt and certify after public hearing, a map delineating boundaries of any wetland, estuary, or existing recreation area indicated in Part IV of the coastal plan within the geographical boundaries of each port.</p>	<p>Not Applicable. This section identifies CCC responsibilities.</p>
<p>Section 30711. (a) A port master plan that carries out the provisions of this chapter shall be prepared and adopted by each port governing body, and for informational purposes, each city, county, or city and county which has a port within its jurisdiction shall incorporate the certified port master plan in its local coastal program. A port master plan shall include all of the following: (1) The proposed uses of land and water areas, where known. (2) The projected design and location of port land areas, water areas, berthing, and navigation ways and systems intended to serve commercial traffic within the area of jurisdiction of the port governing body. (3) An estimate of the effect of development on habitat areas and the marine environment, a review of existing water quality, habitat areas, and quantitative and qualitative biological inventories, and proposals to minimize and mitigate any substantial adverse impact. (4) Proposed projects listed as appealable in Section 30715 in sufficient detail to be able to determine their consistency with the policies of Chapter 3 (commencing with Section 30200) of this division. (5) Provisions for adequate public hearings and public participation in port planning and development decisions. (b) A port master plan shall contain information in sufficient detail to allow the commission to determine its adequacy and conformity with the applicable policies of this division.</p>	<p>Consistent. The District currently has a certified PMP, which would be amended with adoption of the proposed PMPU. As proposed, the PMPU includes sections required by this section of the CCA, including an identification of water and land uses and a list planned improvements that qualify as "appealable" per Section 30715 of the CCA. This Draft PEIR provides an estimate of the effects of future development on habitat areas, the marine environment, and water quality. The proposed PMPU identifies appealable projects with sufficient detail to allow the CCC to determine their adequacy and conformity with the applicable policies of Chapter 3 of the CCA.</p>
<p>Section 30712. In the consideration and approval of a proposed port master plan, the public, interested organizations, and governmental agencies shall be encouraged to submit relevant testimony, statements, and evidence which shall be considered by the port governing body. The port governing body shall publish notice of the completion of the draft master plan and submit a copy thereof to the commission and shall, upon request, provide copies to other interested persons, organizations, and governmental agencies. Thereafter, the port governing body shall hold a public hearing on the draft master plan not earlier than 30 days and not</p>	<p>Consistent. The proposed PMPU was circulated in both April 2019 and October 2020, to allow the public, interested organizations, and governmental agencies to comment on and submit relevant testimony, statements, and evidence to the District. The District will publish a notice of completion for the draft PMPU 30 to 90 days before the draft PMPU (as well as this Draft PEIR) is anticipated to be presented to the Board of Port Commissioners for adoption. A public hearing by the Board of Port Commissioners will be held not earlier than 30 days and not later than 90 days following the date of the notice of completion.</p>

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<p>later than 90 days following the date the notice of completion was published.</p>	<p>Consistent. The District will follow the procedures outlined in this section.</p>
<p>Section 30714. After public notice, hearing, and consideration of comments and testimony received pursuant to Sections 30712 and 30713, the port governing body shall adopt its master plan and submit it to the commission, after public hearing, shall certify the plan or portion of a plan and reject any portion of a plan which is not certified. The commission may not modify the plan as submitted as the condition of certification. If the commission rejects any portion of a plan, it shall base that rejection upon written findings of fact and conclusion of law. If the commission fails to take action within the 90-day period, the port master plan shall be deemed certified. The commission shall certify the plan, or portion of a plan, if the commission finds both of the following: (a) The master plan, or certified portions thereof, conforms with and carries out the policies of this chapter. (b) Where a master plan, or certified portions thereof, provide for any of the developments listed as appealable in Section 30715, the development or developments are in conformity with all the policies of Chapter 3 (commencing with Section 30200).</p>	<p>Consistent. Any development occurring prior to certification of the proposed PMPU would be considered for approval under the provisions of the currently certified PMP.</p>
<p>Section 30715. (a) Until such time as a port master plan or any portion thereof has been certified, the commission shall permit developments within ports as provided for in Chapter 7 (commencing with Section 30600). After a port master plan or any portion thereof has been certified, the permit authority of the commission provided in Chapter 7 (commencing with Section 30600) shall no longer be exercised by the commission over any new development contained in the certified plan or any portion thereof and shall at that time be delegated to the appropriate port governing body, except that approvals of any of the following categories of development by the port governing body may be appealed to the commission: (1) Developments for the storage, transmission, and processing of liquefied natural gas and crude oil in such quantities as would have a significant impact upon the oil and gas supply of the state or nation or both the state and nation. A development which has a significant impact shall be defined in the master plans. (2) Wastewater treatment facilities, except for those facilities which process wastewater discharged incidental to normal port activities or by vessels. (3) Roads or highways which are not principally for internal circulation within the port boundaries. (4) Office and residential buildings not principally devoted to the administration of activities within the</p>	

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<p>port; hotels, motels, and shopping facilities not principally devoted to the sale of commercial goods utilized for water-oriented purposes; commercial fishing facilities; and recreational small craft marina related facilities. (5) Oil refineries. (6) Petrochemical production plants. (b) If maintenance dredging is part of, or is associated with, any category of development specified in paragraphs (1) to (6), inclusive, of subdivision (a), the commission shall not consider that maintenance dredging in its review and approval of those categories.</p>	<p>Consistent. As documented in Section 3.5, <i>PMPU Review and Approvals</i>, of Chapter 3 of this Draft PEIR, the District will submit the proposed PMPU to the CCC for certification and final action.</p>
<p>Section 30716. (a) A certified port master plan may be amended by the port governing body, but an amendment shall not take effect until it has been certified by the commission. Any proposed amendment shall be submitted to, and processed by, the commission in the same manner as provided for submission and certification of a port master plan. (b) The commission shall, by regulation, establish a procedure whereby proposed amendments to a certified port master plan may be reviewed and designated by the executive director of the commission as being minor in nature and need not comply with Section 30714. These amendments shall take effect on the 10th working day after the executive director designates such amendments as minor. (c)(1) The executive director may determine that a proposed certified port master plan amendment is de minimis if the executive director determines that the proposed amendment would have no impact, either individually or cumulatively, on coastal resources, is consistent with the policies of Chapter 3 (commencing with Section 30200), and meets the following criteria: (A) The port governing body, at least 21 days prior to the date of submitting the proposed amendment to the executive director, has provided public notice, and provided a copy to the commission, which specifies the dates and places where comments will be accepted on the proposed amendment, contains a brief description of the proposed amendment, and states the address where copies of the proposed amendment are available for public review, by one of the following procedures: (i) Publication, not fewer times than required by Section 6061 of the Government Code, in a newspaper of general circulation in the area affected by the proposed amendment. If more than one area will be affected, the notice shall be published in the newspaper of largest circulation from among the newspapers of general circulation in those areas. (ii) Posting of the notice by the port governing body both onsite and offsite in the area affected by the proposed amendment.</p>	

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<p>(iii) Direct mailing to the owners and occupants of contiguous property shown on the latest equalized assessment roll. (B) The proposed amendment does not propose any change in land use or water uses or any change in the allowable use of property.</p> <p>(2) At the time that the port governing body submits the proposed amendment to the executive director, the port governing body shall also submit to the executive director any public comments that were received during the comment period provided pursuant to subparagraph (A) of paragraph (1).</p> <p>(3)(A) The executive director shall make a determination as to whether the proposed amendment is de minimis within 10 working days from the date of submittal by the local government. If the proposed amendment is determined to be de minimis, the proposed amendment shall be noticed in the agenda of the next regularly scheduled meeting of the commission, in accordance with Section 11125 of the Government Code, and any public comments forwarded by the port governing body shall be made available to the members of the commission. (B) If three members of the commission object to the executive director's determination that the proposed amendment is de minimis, the proposed amendment shall be set for public hearing in accordance with the procedures specified in subdivision (a) or, at the request of the port governing body, returned to the port governing body. If set for public hearing under subdivision (a), the time requirements set by this section and Section 30714 shall commence from the date on which the objection to the de minimis designation was made. (C) If three or more members of the commission do not object to the de minimis determination, the de minimis amendment shall become a part of the certified port master plan 10 days from the date of the commission meeting. (4) The commission may, after a noticed public hearing, adopt guidelines to implement this subdivision, which shall be exempt from review by the Office of Administrative Law and from Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code. The commission shall file any guidelines adopted pursuant to this paragraph with the Office of Administrative Law.</p>	
<p>Section 30717. The governing bodies of ports shall inform and advise the commission in the planning and design of appealable developments authorized under this chapter, and prior to commencement of any appealable development, the governing body of a port shall notify the commission and other</p>	<p>Consistent. The District will follow the procedures outlined in this section for appealable projects, which have been identified for each planning district in Chapter 5 of the proposed PMPU.</p>

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<p>interested persons, organizations, and governmental agencies of the approval of a proposed appealable development and indicate how it is consistent with the appropriate port master plan and this division. An approval of the appealable development by the port governing body pursuant to a certified port master plan shall become effective after the 10th working day after notification of its approval, unless an appeal is filed with the commission within that time. Appeals shall be filed and processed by the commission in the same manner as appeals from local government actions as set forth in Chapter 7 (commencing with Section 30600) of this division. No appealable development shall take place until the approval becomes effective.</p>	
<p>Section 30718. For developments approved by the commission in a certified master plan, but not appealable under the provisions of this chapter, the port governing body shall forward all environmental impact reports and negative declarations prepared pursuant to the Environmental Quality Act of 1970 (commencing with Section 21000) or any environmental impact statements prepared pursuant to the National Environmental Policy Act of 1969 (42 U.S.C. 4321, et seq.) to the commission in a timely manner for comment.</p>	<p>Consistent. The District has consistently submitted, and will continue to submit, environmental impact reports and negative declarations for non-appealable projects to the CCC for review and comment.</p>
<p>Section 30719. Any development project or activity authorized or approved pursuant to the provisions of this chapter shall be deemed certified by the commission as being in conformity with the coastal zone management program insofar as any such certification is requested by any federal agency pursuant to the Federal Coastal Zone Management Act of 1972 (16 U.S.C. 1451, et seq.), National Oceanic and Atmospheric Administration, and memoranda of understanding between the state and federal governments relative thereto.</p>	<p>Not Applicable. The District is not subject to this section of the CCA because it is not located on Federal land.</p>
<p>Section 30720. If the application of any port master plan or part thereof is prohibited or stayed by any court, the permit authority provided for in Chapter 7 (commencing with Section 30600) shall be reinstated in the commission. The reinstated permit authority shall apply as to any development which would be affected by the prohibition or stay.</p>	<p>Consistent. The District will follow the procedures outlined in this section, as applicable.</p>
<p>Section 30721. (a) The Legislature recognizes that Port Hueneme is unique in its relationship to the coast in that it is the only deep water port operated by a harbor district, and is without access to city or county funds. Therefore, the governing body of Port Hueneme may claim reimbursement of costs it incurs in the preparation and certification of a port master plan as required by this chapter. (b) Prior to</p>	<p>Not applicable. The proposed PMPU does not involve Port Hueneme.</p>

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<p>submitting any claim for reimbursement, the governing body of the port shall submit its proposed claims to the executive director of the commission for review and approval and shall provide adequate documentation to enable the executive director to make the following determinations: (1) That the work done was directly attributable to the operation of this chapter. (2) That the work done is reasonably related to, and appears to be necessary for, the preparation of a certifiable port master plan for the geographic area within the port's jurisdiction as identified by the commission pursuant to Section 30710. (3) That the governing body of a port is not reimbursed for the costs of the work from any other source. The executive director of the commission shall, within 60 days after receipt of the necessary information, approve the proposed claim, if the director can make the determinations set forth in this subdivision. (c) After a proposed claim has been reviewed and approved by the executive director of the commission pursuant to subdivision (b), the governing body of the port may submit its claim for reimbursement to the Controller who shall then process and pay any such claim as provided for in Section 2231 of the Revenue and Taxation Code.</p>	
SANDAG's Regional Plan	
<p>Focus growth in areas that are already urbanized, allowing the region to set aside and restore more open space in our less developed areas.</p>	<p>Consistent. The proposed PMPU area is located within three cities that are classified as urban locations. Therefore, all land development would occur in urbanized areas. Some water uses could be located offshore from those urbanized areas and may provide transitional structures to connect land uses to the potential, future water uses, such as piers, docks, marinas and mobility hubs, water-based transfer points, and boat slips. slips. Furthermore, ECO Policy 1.1.2 directs the District to prioritize and pursue opportunities for the protection, restoration, creation, and enhancement of sensitive habitats and State and Federally listed coastal species, which, per ECO Policies 1.1.13, 1.1.15, 1.1.21, 1.1.22, and 1.1.23, would involve identifying locations for preservation and protection for sensitive habitat. The increase in the water area designated for conservation area as well as these policies would further ensure that undeveloped water areas would be set aside and restored.</p>
<p>Protect and restore our region's urban canyons, coastlines, beaches, and water resources.</p>	<p>Consistent. The proposed PMPU area does not contain any urban canyon areas. However, the proposed PMPU would not involve any development at beaches or coastlines within PD8, Kellogg Beach in PD1, and the beach area in</p>

Goal, Policy, Objective	PMPU Consistency
Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.	<p>Spanish Landing Park in PD2. In addition, protection and restoration of water resources is emphasized in the proposed PMPU in the Ecology Element in ECO Policy 2.1.1 through ECO Policy 3.2.4.</p> <p>Consistent. As discussed in Section 4.11, <i>Population and Housing</i>, there are many competitive jobs within the proposed PMPU area, and much of the proposed PMPU area is adjacent to higher intensity areas, including Downtown San Diego, which also include a high concentration of various jobs with competitive wages. The proposed PMPU would implement mobility hubs throughout the proposed PMPU area, which are intended to serve both visitors and employees as they access and travel throughout Tidelands. Regional Mobility Hubs would provide a direct connection to a regional transit stop, such as a trolley or bus stop, and incorporation of a bayfront circulator stop, all of which would encourage the use of transit. Additionally, these mobility hubs would connect to water-based access points throughout the Bay, where feasible. In addition, the proposed PMPU would improve access to and circulation within the proposed PMPU area by implementing mobility hubs throughout the proposed PMPU area, which would provide connections to bicycle and pedestrian facilities and amenities. In addition, the proposed PMPU would include modifications to existing roadways in order to incorporate multi-modal options, such as bicycle and pedestrian paths.</p>
Build infrastructure that makes the movement of freight in our community more efficient and environmentally friendly.	<p>Consistent. As discussed in Mobility Goal 2 and subsequent policies, the District would provide an integrated, efficient, diverse, and sustainable network that facilitates the movement of goods. Goods Movement Standards are incorporated into the development standards of the proposed PMPU and address requirements specific to truck routes, shipyards, freight movement and shipping, goods conveyance, and parking. In addition, roadway improvements identified in the proposed PMPU also incorporate an information technology system and signalization improvements that can be modified or adjusted during peak and nonpeak hours to better accommodate traffic demand (see Roadway Improvements for PD4). Furthermore, the District would seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently transfer goods, as well as collaborate with public and private entities to</p>

Goal, Policy, Objective	PMPU Consistency
<p>Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.</p>	<p>invest in terminal infrastructure that supports the optimization of cargo movement.</p> <p>Consistent. The PMPU proposes implementation of new mobility hubs and roadway modifications to increase multi-modal transportation options, including increased use of transit, and improved bicycle and pedestrian accessibility. As noted above, the proposed PMPU area is generally located proximal to public transit services. The PMPU proposes numerous policies aimed at reducing greenhouse gas and air pollution emissions, including ECO Policy 3.1.2 through ECO Policy 3.1.5, which involve implementation of clear air action measures, advancement of maritime clean air strategies, implementation of clean vessel technologies, and financing programs to implement recommended clean air measures. In addition, as described in Sections 4.2 and 4.14 of this Draft PEIR, mitigation measures have been identified to reduce air quality and VMT impacts, respectively. As documented throughout this Draft PEIR, the proposed PMPU would minimize substantial adverse environmental impacts through the implementation of mitigation measures. The District would coordinate with permittees to provide infrastructure that supports a mix of water and land uses, including the needs of established Tidelands industries and emerging Public Trust-consistent businesses, while also providing environmental benefit (ECON Policy 2.1.2). Additionally, the District would engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District’s environmental and operational regulations and plans and the State’s sustainability objectives.</p>
<p>Support energy programs that promote sustainability.</p>	<p>Consistent. The proposed PMPU requires permittees to implement new technology where possible to incorporate clean air action measures, which may include vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered (ECO Policy 3.1.2). Additionally, the District would require permittees to implement infrastructure and clean vessel technologies, for both while in transit and at berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable (ECO Policy 3.1.4). As new opportunities and technologies become available in the areas of renewable energy, battery storage, and electrification of mobile sources, the District would</p>

Goal, Policy, Objective	PMPU Consistency
<p>Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people, live, and play.</p>	<p>actively seek to advance programs and projects that reduce emissions in partnership with its tenants and other stakeholder agencies.</p> <p>Consistent. The policies in the Environmental Justice Element emphasize the District’s commitment to coastal access, public participation, and a healthy environment through: improved mobility and transit linkages from adjacent disadvantaged communities throughout Tidelands and additional free and lower cost recreational opportunities; greater opportunities to participate in the District’s planning and decision-making processes; reduced pollution, which may disproportionately affect disadvantaged communities; and enhanced collaboration locally and regionally, as well as deepening relationships with indigenous communities, so that all communities are cleaner and thriving places to work, live, and play. The proposed PMPU would implement mobility hubs throughout the proposed PMPU area, which would provide connections to bicycle and pedestrian facilities and amenities. Regional Mobility Hubs would provide a direct connection to a regional transit stop, encouraging the use of transit in communities. The implementation of these transportation improvements would support the development of healthy and sustainable communities.</p>
<p>Take advantage of new technologies to make the transportation system more efficient and accessible.</p>	<p>Consistent. As noted above, implementation of the proposed PMPU would involve installation of a number of mobility hubs, including Regional Mobility Hubs, Local Gateway Mobility Hubs, and Connector Mobility Hubs, which have specific siting and amenities criteria in order to increase the reliability and convenience of multi-modal travel options. Another intent of the mobility hubs is to consolidate public parking to allow on-street or surface parking lots to be repurposed into Recreation Open Space uses. Planned improvements discussed in Chapter 5 of the proposed PMPU involve roadway modifications that would seek to create more efficient circulation and efficiently accommodate vehicular traffic. Roadway improvements in the proposed PMPU would incorporate an information technology system and signalization improvements that can be modified or adjusted during peak and nonpeak hours to better accommodate traffic demand (see Roadway Improvements for PD4). Additionally, in accordance with Mobility Policy 2.2.5, the District—in coordination with permittees of development, tenants, adjacent jurisdictions, and regional transportation agencies—would maintain</p>

Goal, Policy, Objective	PMPU Consistency
<p>Collaborate with Native American tribes, Mexico, military bases, neighboring counties, infrastructure providers, the private sector, and local communities to design a transportation system that connects to the mega-region and national network, works for everyone, and fosters a high quality of life for all.</p>	<p>and develop improvements to linkages between the marine terminals and landside networks, including roadways, to enable efficient movement of goods along those networks and to support the working waterfront.</p> <p>Consistent. The District does not have jurisdiction over regional transportation facilities that would provide direct connection to Mexico or neighboring counties. However, the proposed PMPU includes mobility options within the proposed PMPU area, such as Regional Mobility Hubs that are intended to improve connectivity with regional transit stops, encouraging the use of transit in communities. In addition, in accordance with EJ Objective 2.2 and subsequent policies, the District would provide meaningful engagement opportunities for disadvantaged and indigenous communities, to participate in the District’s planning and public involvement processes. This would include ensuring that the expressed concerns of people from disadvantaged and indigenous communities are acknowledged and considered as part of the District’s planning and development decisions (EJ Policy 2.2.1). Additionally, the proposed PMPU expressly includes goals and policies that support the collaboration and planning of interconnected transportation networks for in part, military operations. The Mobility Element addresses the maintenance of the Strategic Highway Network (STRAHNET) for military mobilization and deployment of the military personnel and materiel. This is found within the Mobility Element at Goal 3 and its relevant objectives and policies. The Mobility Element Purpose (Section 3.2.1 of the Mobility Element) describes the District maintaining and enhancing travel options and an interconnected mobility network in part, for the future demands of the military.</p>
<p>As we plan for our region, recognize the vital economic, environmental, cultural, and community linkages between the San Diego region and Baja California.</p>	<p>Not Applicable. The District’s jurisdiction is limited to the Tidelands, and the proposed PMPU does not specifically address linkages between San Diego and Baja California. However, as detailed in the Environmental Justice Element, the proposed PMPU encourages enhanced collaboration locally and regionally and deepening relationships with indigenous communities so that all communities are cleaner and thriving places to work, live, and play. While the goals and policies are not specific to links between San Diego and Baja California, they do promote greater inclusivity for the benefit of all stakeholder communities</p>

Goal, Policy, Objective	PMPU Consistency
<p>Create great places for everyone to live, work, and play.</p>	<p>Consistent. The proposed PMPU directs the District to plan, design, and implement a comprehensive waterfront open space network that provides access to and throughout the public realm. These include facilities, such as parks and waterside amenities, as well as public fishing piers, launch areas for motorized and nonmotorized watercraft, and overnight accommodations. As discussed in the Environmental Justice Element of the proposed PMPU, development would provide a range of free and lower cost recreational facilities throughout Tidelands that are accessible to disadvantaged communities. Additionally, the District, or CDPs issued by the District— would maintain and, where feasible, expand free and lower cost recreational facilities, such as recreational fishing, parks, or viewing piers, on Tidelands adjacent to Portside and Tidelands Border Communities. In accordance with the Economics Element, the District shall continue to reinvest lease revenues to support financing and maintenance of public improvements in alignment with CCA obligations, including lower cost visitor serving and recreational facilities such as parks, promenades, public piers, and public art. In addition, WLU Goal 6 and subsequent objectives and policies would expand the collection of lower cost visitor and recreational facilities available to the public. Planning District 2 and PD3 identify planned improvements that would include up to approximately 1,900 lower cost overnight accommodations. Expansion of mobility hubs and roadway modifications to increase multi-modal transportation options would ensure access to jobs, services, and recreation within the Tidelands.</p>
<p>Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.</p>	<p>Consistent. The PMPU proposes implementation of new mobility hubs and roadway modifications to increase multi-modal transportation options, including increased use of transit as well as improved bicycle and pedestrian accessibility.</p>
<p>Increase the supply and variety of housing types – affordable for people of all ages and income levels in areas with frequent transit service and with access to a variety of services.</p>	<p>Not Applicable. As discussed in Section 4.11, the proposed PMPU does not propose residential development within the proposed PMPU area because residential use is not an allowable use on the Tidelands.</p>

Impacts of Proposed PMPU Element Policies

None of the proposed PMPU policies would result in impacts related to a conflict with a land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect. Instead, as documented in Table 4.9-1, policies proposed in the PMPU would promote

consistency with applicable plans, policies, and regulations adopted for the purposes of avoiding or mitigating an environmental effect.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not cause a significant environmental impact due to a conflict with a plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect. Impacts would be less than significant.

4.9.5 Cumulative Impact Analysis

Cumulatively considerable impacts from past, present, and probable future projects are determined by whether there are cumulative inconsistencies with the applicable land use plans that have resulted or will result in significant physical impacts or by the past, present, or future physical division of established communities.

4.9.5.1 Geographic Scope

The geographic scope of analysis for cumulative land use and planning impacts to which the proposed PMPU may contribute includes the San Diego Region. This analysis considers a number of the plans and programs listed in Table 2-2.

4.9.5.2 Cumulative Effects

Table 2-2 includes past, present, and probable future plans and programs in the vicinity of the proposed PMPU area.

Past projects within the Downtown area have been subject to local regulations governing land use decisions and have resulted in the development of a highly urbanized metropolitan city center. Throughout the development of past projects, the Downtown area has generally maintained its street grid system and has not resulted in the division of a neighborhood. The District's existing PMP, as amended, has been certified by the CCC, and all past development projects within District's jurisdiction have been approved pursuant to the adopted PMP, ensuring review and general conformity with the coastal zone management program. Since adoption and certification of the current PMP, there have been cases where PMP amendments were required to implement various development projects. However, these amendments have undergone District review and environmental review and District approval, and have been certified by the CCC, when required. As a result, impacts from past projects have not been cumulatively significant.

The National City Bayfront Projects and Plan Amendments EIR, the Chula Vista Bayfront Master Plan project, the Seaport San Diego project, and the Wetland Mitigation Bank at Pond 20 project are located within the District's jurisdiction. The other plans and programs in Table 2-2 are either approved or in preparation in adjacent jurisdictions. The Midway-Pacific Highway Community Plan Update, the City of Imperial Beach 2019 General Plan/Local Coastal Program Land Use Plan Update, the San Diego International Airport Development Plan, the San Diego County Regional Airport Authority NAS North Island Airport Land Use Compatibility Plan, and the SANDAG 2021 Regional Plan are all located either within or adjacent to the proposed PMPU area. As such, because the street system in Downtown San Diego is established and none of the current or probable future plans

propose changes to the circulation system, and current cumulative projects and probable future projects in the Downtown area would be required to demonstrate consistency with the San Diego Downtown Community Plan, it is not expected that these projects would physically divide the established Downtown neighborhood. The Cities of Coronado and Imperial Beach are primarily developed, and future plans would not physically divide the established existing neighborhoods.

Within the District's jurisdiction, public access and use of the waterfront continues to be a priority. Proposed plans are held to strict standards and consistency with the PMP, in terms of public access. Proposed plans would be required to demonstrate consistency with public access requirements of the PMP. Consequently, there are no current or probable future development plans within the proposed PMPU's cumulative geographic scope that would physically divide an established community or result in a land use inconsistency. Therefore, cumulative land use and planning impacts associated with past, present, and probable future projects are less than significant.

4.9.5.3 Project Contribution

The proposed PMPU would facilitate the construction of future visitor-serving uses within the proposed PMPU area, such as new hotels and lower cost accommodations, restaurants and entertainment venues, park space and promenades, retail, convention and meeting space, office space, and other uses. As discussed in Section 4.9.4.4 above, future development under the proposed PMPU, including Options 1, 2, and 3, would not physically divide an established community and impacts would be less than significant and not make cumulatively considerable contribution to cumulative impacts. Additionally, the proposed land use changes under the proposed PMPU would not result in uses that would be incompatible with existing PMP land uses within the District's jurisdiction or surrounding areas. As demonstrated previously, the proposed PMPU would be consistent with all applicable policies in the governing land use documents, and impacts would be less than significant.

As noted above, a cumulatively significant land use impact does not exist, and the proposed PMPU would not make cumulatively considerable contribution to cumulative impacts such that a cumulatively significant impact would be created. The proposed PMPU's contribution to inconsistencies with land use and planning policies would be less than cumulatively considerable.

4.9.5.4 Cumulative Impact Determination and Mitigation

The proposed PMPU's incremental contribution to cumulative land use and planning impacts would not be cumulatively considerable and would be less than significant.

4.10.1 Overview

This section describes the existing conditions and laws and regulations related to noise and vibration. The section also discusses the proposed Port Master Plan Update’s (PMPU’s) potential to increase noise and vibration in the vicinity during construction and operation. Noise and vibration impacts related to private airport/airstrips were analyzed in Section XII of the proposed PMPU’s Initial Study/Environmental Checklist (Appendix A) and were determined to be less than significant. The analysis and conclusions regarding these impacts are included in Chapter 5, Section 5.4, *Effects Found Not to Be Significant*.

Table 4.10-1 summarizes the significant impacts and mitigation measures (MMs) discussed in Section 4.10.6.4, *Project Impacts and Mitigation Measures*.

Table 4.10-1. Summary of Significant Noise and Vibration Impacts and Mitigation Measures

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-NOI-1: Exceed Noise Thresholds at Parks During Construction	All planning districts	MM-NOI-1: Notify Users of Impacted Parks	Less than Significant	Mitigation would enable park users to avoid excessive noise and utilize similar alternative parks in the vicinity.
Impact-NOI-2: Exceed Thresholds at Other Noise-Sensitive Receptors During Construction	All planning districts	MM-NOI-2: Avoid or Reduce Construction Noise from Pile Driving MM-NOI-3: Implement General Best Practices for Construction Noise Abatement MM-NOI-4: Install Temporary Noise Barriers to Shield Noise-Sensitive Receptors from Excessive Construction Noise Levels	Significant and Unavoidable	Because the design and location of future development projects allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts.
Impact-NOI-3: Exceed Local Noise Limits for Construction	All planning districts	MM-NOI-5: Prohibit Exterior Construction Activities Outside of the Permitted Construction Hours	Significant and Unavoidable	Because the design and location of future development projects allowed under the proposed PMPU are

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
During Prohibited Hours				unknown at this time, it is not possible to determine the extent to which construction activity may be feasibly constrained to the locally-permitted construction hours.
Impact-NOI-4: Excessive Traffic Noise Increases on Existing Roadways Above Local Standards	PD2 and PD3	MM-NOI-6: Conduct Project-Specific Traffic Noise Analyses for Projects that Would Double the Traffic Volume on One or More Affected Streets	Significant and Unavoidable	Because the timing and location of specific impacts due to projects allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent MM-NOI-6 would be feasible and effective in abating or reducing the impacts.
Impact-NOI-5: Substantial Traffic Noise Increases Due to Roadway Improvements and Modifications	PD1, PD2, PD3, and PD4	MM-NOI-7: Design Roadway Improvement and Modification Projects to Avoid Noise Increases Greater than 3 dB CNEL	Significant and Unavoidable	Because the design and location of future roadway improvement and modification projects allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent MM-NOI-7 would be feasible and effective in abating or reducing the impacts.
Impact-NOI-6: Significant Noise Impact from Regional Mobility Hubs	PD2 and PD3	MM-NOI-8: For Regional Mobility Hubs Within 125 Feet of Noise-Sensitive Receptors, Design and Construct Facilities to Control Noise from New Sources Such as Parking Lots	Significant and Unavoidable	Because the design and location of future regional mobility hub projects allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent MM-NOI-8 would be feasible and effective in abating or reducing the impacts.

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-NOI-7: Exceed Local Noise Limits for Commercial Developments	PD1, PD2, PD3, PD4, PD8, PD9, and PD10	MM-NOI-9: Design and Construct New Commercial Uses to Control Noise from All Onsite Equipment and Activities	Significant and Unavoidable	Because the design and location of future commercial projects allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent MM-NOI-9 would be feasible and effective in abating or reducing the impacts.
Impact-NOI-8: Exceed Local Noise Limits for Outdoor Use Areas and Outdoor Special Events	PD1, PD2, PD3, PD8, PD9, and PD10	MM-NOI-10: Design and Operate Outdoor Activity Areas to Control Operational Noise MM-NOI-11: Incorporate Operational/Contract Specifications to Minimize Exterior Special Event Noise and Regulate Special Events at New Parks	Significant and Unavoidable	Because the design and location of future outdoor activity areas and the details of outdoor special events allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts.
Impact-NOI-9: Exceed Caltrans Guideline Criteria for Potential Building Damage During Construction	All planning districts	MM-NOI-12: Avoid or Reduce Potentially Damaging Vibration at Nearby Buildings from Project Construction	Less than Significant	MM-NOI-12 would avoid or minimize groundborne vibration affecting nearby buildings and repair any damage caused by project construction.
Impact-NOI-10: Exceed Caltrans Guideline Criteria for Potential Human Annoyance at Sensitive Receptors During Project Construction	All planning districts	MM-NOI-13: Avoid or Reduce Potentially Annoying Vibration at Occupied Sensitive Buildings During Project Construction	Significant and Unavoidable	MM-NOI-13 would reduce impacts; however, it may not be possible to fully implement this measure and reduce groundborne vibration to less than “barely perceptible” (0.04 in/s PPV) at all nearby sensitive receptors due to the

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
				potentially short distances between construction sites and neighboring buildings.
Impact-C-NOI-1: Exceed the Established 75 dBA L_{eq} Thresholds at Noise-Sensitive Receptors	All planning districts	MM-NOI-1, MM-NOI-2, MM-NOI-3, and MM-NOI-4 (described above)	Cumulatively Considerable and Unavoidable	Because the timing, location, and design details of future projects are unknown at this time, it is not possible to quantify whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts.
Impact-C-NOI-2: Generate Noise in Excess of Local Limits	All planning districts	MM-NOI-5 (described above)	Cumulatively Considerable and Unavoidable	Because the timing, location, and design details of future projects are unknown at this time, it is not possible to determine the extent to which construction activity may be feasibly constrained to the locally-permitted construction hours.
Impact-C-NOI-3: Increase Noise Levels at Existing Noise-Sensitive Receptors by 3 dB CNEL or More	PD1, PD2, PD3, and PD4	MM-NOI-6, and MM-NOI-7 (described above)	Cumulatively Considerable and Unavoidable	Because the timing, location, and design details of future projects are unknown at this time, it is not possible to quantify whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts.
Impact-C-NOI-4: Generate Noise at Sensitive Receptors in Excess of Local Limits	All planning districts	MM-NOI-8, MM-NOI-9, MM-NOI-10, and MM-NOI-11 (described above)	Cumulatively Considerable and Unavoidable	Because the timing, location, and design details of future projects are unknown at this time, it is not possible to quantify

Summary of Significant Impact(s)	Applicable Planning District(s)*	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
				whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts.
Impact-C-NOI-5: Exceed Caltrans Guideline Criteria for Potential Building Damage	All planning districts	MM-NOI-12 (described above)	Less than Cumulatively Considerable	MM-NOI-12 would avoid or minimize groundborne vibration affecting nearby buildings.
Impact-C-NOI-6: Exceed Caltrans Guideline Criteria for Potential Human Annoyance at Sensitive Receptors	All planning districts	MM-NOI-13 (described above)	Cumulatively Considerable and Unavoidable	It may not be possible to fully implement MM-NOI-13 due to the potentially short distances between construction sites and neighboring buildings.

* PD5 and PD6 are not considered in this table because they are not addressed in the proposed PMPU.

4.10.2 Noise Fundamentals

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air or water) to a hearing organ, such as a human ear. Noise is often defined as sound that is objectionable because it is unwanted, disturbing, or annoying.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and the obstructions or atmospheric factors, which affect the propagation path to the receptor, determine the sound level and the characteristics of the noise perceived by the receptor.

The following sections provide an explanation of key concepts and acoustical terms used in the analysis of environmental and community noise. Some of these concepts are also applicable to underwater noise, which is discussed further in Section 4.3, *Biological Resources*.

4.10.2.1 Frequency, Amplitude, and Decibels

Continuous sound can be described by its *frequency* (pitch) and *amplitude* (loudness). A low-frequency sound is perceived as low in pitch; a high-frequency sound is perceived as high-pitched. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed

in kilohertz (kHz), or thousands of Hz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source correlates with the loudness of that source. The amplitude of a sound is typically described in terms of *sound pressure level* (SPL), also referred to simply as the sound level. The SPL refers to the root-mean-square (RMS)¹ pressure of a sound wave and is measured in units called micro Pascals (μPa). One μPa is approximately one hundred-billionth (0.0000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to over 100,000,000 μPa . Because of this large range of values, sound is rarely expressed in terms of μPa . Instead, a logarithmic scale is used to describe the SPL in terms of decibels, abbreviated dB. The decibel is a logarithmic unit that describes the ratio of the actual sound pressure to a reference pressure (20 μPa is the standard reference pressure level for acoustical measurements in air). Specifically, a sound pressure level, in decibels, is calculated as follows:

$$SPL = 20 \times \log_{10} \left(\frac{X}{20 \mu Pa} \right)$$

where X is the actual sound pressure and 20 μPa is the standard reference pressure level for acoustical measurements in air. The threshold of hearing for young people is about zero dB, which corresponds to 20 μPa .

Decibel Calculations

Because decibels represent noise levels using a logarithmic scale, sound pressure levels cannot be added, subtracted, or averaged through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one bulldozer produces a sound pressure level of 80 dB, two bulldozers would not produce a combined sound level of 160 dB. Rather, they would combine to produce 83 dB. However, where ambient noise levels are high in comparison to a new noise source, there will be a small change in noise levels. For example, when an ambient noise level of 70 dBA is combined with a noise source generating 60 dBA, the resulting noise level equals 70.4 dBA. The cumulative sound level of any number of sources can be determined using decibel addition. The same decibel addition is used for A-weighted decibels described below.

Similarly, the arithmetic mean (average) of a series of noise levels does not accurately represent the overall average noise level. Instead, the values must be averaged using a linear scale before converting the result back into a logarithmic (dB) noise level. This method is typically referred to as calculating the “energy average” of the noise levels.

¹ Because sound pressure fluctuates between positive and negative values, the arithmetic average is essentially zero. Root-mean-square (RMS) describes a more meaningful value related to the average magnitude of the pressure fluctuations. RMS is calculated by squaring all of the amplitudes over the period of interest, determining the mean of the squared values, and then taking the square root of the mean of the squared values.

4.10.2.2 A-Weighting

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound, and the loudness or human response is determined by characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000 to 5,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels in various frequency bands are adjusted (or “weighted”), depending on the human sensitivity to those frequencies. The resulting SPL is expressed in A-weighted decibels, abbreviated dBA.

The A-weighting scale approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments regarding the relative loudness or annoyance of a sound, their judgments correlate well with the A-weighted sound levels of those sounds. Table 4.10-2 describes typical A-weighted sound levels for various noise sources.

Table 4.10-2. Typical Noise Levels in the Environment

Common Outdoor Noise Source	Sound Level (dBA)	Common Indoor Noise Source
	— 110 —	Rock band
Jet flying at 1,000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher in next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: California Department of Transportation 2013.
dBA = A-weighted decibels.

4.10.2.3 Noise Descriptors

Because sound levels can vary markedly over a short period of time, various descriptors or noise “metrics” have been developed to quantify environmental and community noise. These metrics generally describe either the average character of the noise or the statistical behavior of the variations in the noise level. Some of the most common metrics used to describe environmental noise, including those metrics used in this report, are described below.

Equivalent Sound Level (L_{eq}) is the most common metric used to describe short-term average noise levels. The L_{eq} describes the average acoustical energy content of noise for an identified period of time, commonly 1 hour. For many noise sources, the L_{eq} will vary, depending on the time of day. A prime example is traffic noise, which rises and falls, depending on the amount of traffic on a given street or freeway.

Maximum Sound Level (L_{max}) and **Minimum Sound Level (L_{min})** refer to the maximum and minimum sound levels, respectively, that occur during the noise measurement period. More specifically, they describe the root-mean-square sound levels that correspond to the loudest and quietest 1-second intervals that occur during the measurement.

Percentile-Exceeded Sound Level (L_{xx}) describes the sound level exceeded for a given percentage of a specified period. For example, the L_{50} is the sound level exceeded 50 percent of the time (such as 30 minutes per hour), and L_{25} is the sound level exceeded 25 percent of the time (such as 15 minutes per hour). Many municipalities use L_{xx} metrics in their noise ordinances to define permissible noise limits, allowing different noise levels depending on the duration of the noise within a particular hour.

Community Noise Equivalent Level (CNEL) is a measure of the 24-hour average A-weighted noise level that is also time-weighted to “penalize” noise that occurs during the evening and nighttime hours when noise is generally recognized to be more disturbing (because people are trying to rest, relax, and sleep during these times). 5 dBA is added to the L_{eq} during the evening hours of 7 p.m. to 10 p.m.², and 10 dBA is added to the L_{eq} during the nighttime hours of 10 p.m. to 7 a.m.³ and the energy average is then taken for the whole 24-hour day.

Day-Night Sound Level (L_{dn}) is very similar to the CNEL described above. L_{dn} is also a time-weighted average of the 24-hour A-weighted noise level. The only difference is that no “penalty” is applied to the evening hours of 7 p.m. to 10 p.m. 10 dBA is added to the L_{eq} during the nighttime hours of 10 p.m. to 7 a.m. and the energy average is then taken for the whole 24-hour day.

It is noted that various Federal, State, and local agencies have adopted CNEL or L_{dn} as the measure of community noise. While not identical, CNEL and L_{dn} are normally within 1 dBA of each other when measured in typical community environments, and many noise standards/regulations use the two interchangeably.

² A 5 dB noise increase is generally considered to be a readily perceptible change in the noise level for a listener.

³ A 10 dB noise increase is generally perceived as a doubling of the noise level for a listener.

4.10.2.4 Sound Propagation

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise is reduced with distance depends on the following important factors.

Geometric Spreading. Sound from a single source (i.e., a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. Highway noise is not a single stationary point source of sound. The movement of vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a “line” source) rather than from a point. This results in cylindrical spreading rather than the spherical spreading resulting from a point source. The change in sound level (i.e., attenuation or decrease) from a line source is 3 dBA per doubling of distance.

Ground Absorption. Usually the noise path between the source and the observer is very close to the ground. The excess noise attenuation from ground absorption occurs due to acoustic energy losses on sound wave reflection. For acoustically absorptive or “soft” sites (i.e., sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.

Atmospheric Effects. Research by the California Department of Transportation (Caltrans 2013) and others (Harris 1998, ADOT 2005) has shown that atmospheric conditions can have a major effect on noise levels. Factors include wind, air temperature (including vertical temperature gradients), humidity, and turbulence. Receptors downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas receptors upwind can have lower noise levels. Increased sound levels can also occur over relatively large distances because of temperature inversion conditions (i.e., increasing air temperature with elevation).

Shielding by Natural or Human-Made Features. A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by this shielding depends on the size of the object, proximity to the noise source and receptor, surface weight, solidity, and the frequency content of the noise source. Natural terrain features (such as hills and dense woods) and human-made features (such as buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receptor with the specific purpose of reducing noise. In addition to the noise that diffracts over the top of a barrier, noise will also diffract around the ends of the barrier leading to “flanking” noise that can reduce the overall efficacy of the barrier. Assuming it is long enough to minimize the effects of flanking noise, a barrier that breaks the line of sight between a source and a receptor will typically result in at least 5 dB of noise reduction. A taller barrier may provide as much as 20 dB of noise reduction.

4.10.2.5 Human Response to Noise

Noise-sensitive receptors (also called “receivers”) are locations where people reside or where the presence of unwanted sound may adversely affect the use of the land (see Section 4.10.2.6, *Noise-Sensitive Land Uses*, below). Noise can have a range of effects on people including hearing damage, sleep interference, speech interference, performance interference, physiological responses, and annoyance. Each of these is briefly described below:

Hearing Damage. A person exposed to high noise levels can suffer either gradual or traumatic hearing damage. Gradual hearing loss occurs with repeated exposure to excessive noise levels and is most commonly associated with occupational noise exposures in heavy industry or other very noisy work environments. Traumatic hearing loss is caused by sudden exposure to an extremely high noise level, such as a gunshot or explosion at very close range. The potential for noise-induced hearing loss is not generally a concern in typical community noise environments. Noise levels in neighborhoods, even in very noisy airport environs, are not sufficiently loud as to cause hearing loss.

Sleep Interference. Exposure to excessive noise levels at night has been shown to cause sleep disturbance. Sleep disturbance refers not only to awakening from sleep, but also to effects on the quality of sleep such as altering the pattern and stages of sleep. World Health Organization (WHO) guidelines recommend noise limits of 30 dBA L_{eq} (8-hour average) for continuous noise and 45 dBA L_{max} for single sound events inside bedrooms at night to minimize sleep disturbance (WHO 1999).

Speech Interference. Speech interference can be a problem in any situation where clear communication is desired, but is often of particular concern in learning environments (such as schools) or situations where poor communication could jeopardize safety. Normal conversational speech inside homes is in the range of 50 to 65 dBA (EPA 1977), and any noise in this range or louder may interfere with speech. As background noise levels rise, the intelligibility of speech decreases and the listener will fail to recognize an increasing percentage of the words spoken. A speaker may raise his or her voice in an attempt to compensate for higher background noise levels, but this in turn can lead to vocal fatigue for the speaker.

Performance Interference. Excessive noise has been found to have various detrimental effects on human performance, including information processing, concentration, accuracy, reaction times, and academic performance. Intrusive noise from individual events can also cause distraction. These effects are of obvious concern for learning and work environments.

Physiological Responses. Acute noise has been shown to cause measurable physiological responses in humans, including changes in stress hormone levels, pulse rate, and blood pressure. The extent to which these responses cause harm or are signs of harm is not clearly defined, but it has been postulated that they could contribute to stress-related diseases, such as hypertension, anxiety, and heart disease. However, research indicates links between environmental noise and permanent health effects are generally weak and inconsistent. Statistically significant health risks have been found for extended exposure to very high noise level, such as for workers exposed to high levels of industrial noise for 5 to 30 years (WHO 1999).

Annoyance. The subjective effects of annoyance, nuisance, and dissatisfaction are possibly the most difficult to quantify, and no completely satisfactory method exists to measure these effects. This difficulty arises primarily from differences in individual sensitivity and habituation to sound, which can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing acuity. An important tool in estimating the likelihood of annoyance due to a new sound is by comparing it to the existing baseline or “ambient” environment to which that person has adapted. In general, the more the level or tonal (frequency) variations of a sound exceed the previously existing ambient sound level or tonal quality, the less acceptable the new sound will be, as judged by the exposed individual.

In most cases, effects from sounds typically found in the natural environment would be limited to annoyance or interference. Physiological effects and hearing loss would be more commonly associated with manmade noise, such as in an industrial or an occupational setting. Studies have

shown that under controlled conditions in an acoustics laboratory, a healthy human ear is able to discern changes in sound levels of 1 dBA. However, it is widely accepted that a doubling of sound energy, which results in a change of 3 dBA in the normal environmental noise, is considered just noticeable to most people. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as being twice as loud. Accordingly, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) resulting in a 3 dBA increase in sound would generally be barely detectable.

4.10.2.6 Noise-Sensitive Land Uses

Noise sensitivity varies by land use and time of day. The San Diego Unified Port District (District) considers the following land uses noise-sensitive:

- **Residences** (including hospitals, nursing facilities, or intermediate care facilities with overnight patient stays).
- **Schools and childcare facilities** are typically only considered noise sensitive during daytime and evening hours when children are onsite or special events occur in the evening.
- **Hotels and other guest lodgings** are typically only considered noise sensitive during the evening and nighttime hours (i.e., 7:00 p.m. to 7:00 a.m.) due to overnight accommodation expectations of hotel guests. However, hotels and other guest lodgings are not considered noise sensitive during the daytime hours due to the transient nature of their use during the day.
- **Parks and other public outdoor areas** are typically only considered noise sensitive during hours of operation (typically 6:00 a.m. to 10:30 p.m.) because they should generally be unoccupied outside of these hours.

4.10.3 Groundborne Vibration Fundamentals

Groundborne vibration is a small, rapidly fluctuating motion transmitted through the ground. The effects of groundborne vibrations are typically limited to causing nuisance or annoyance to people, but at extreme vibration levels damage to buildings may also occur.

In contrast to airborne sound, groundborne vibration is not a phenomenon that most people experience every day. The ambient groundborne vibration level in residential areas is usually much lower than the threshold of human perception (FTA 2018). Most perceptible indoor vibration is caused by sources within buildings, such as mechanical equipment while in operation, people moving, or doors slamming. Typical outdoor sources of perceptible groundborne vibration are heavy construction activity (such as blasting, pile driving, or earthmoving), steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible, even in locations close to major roads. The strength of groundborne vibration from typical environmental sources diminishes (or attenuates) fairly rapidly over distance.

For the prediction of groundborne vibration, the fundamental model consists of a vibration source, a receptor, and the propagation path between the two. The power of the vibration source and the characteristics and geology of the intervening ground, which affect the propagation path to the receptor, determine the groundborne vibration level and the characteristics of the vibration perceived by the receptor.

Groundborne noise occurs when vibration propagating through a building causes room surfaces to vibrate and radiate noise into interior spaces. Many vibration sources, such as heavy construction

and steel-wheeled trains, also generate substantial levels of airborne noise. This airborne noise typically dominates the overall noise level such that any groundborne noise contribution is negligible to a person inside the building. Groundborne noise is typically only an issue for scenarios that do not generate high levels of airborne noise at the receiver location. Examples include subway or tunnel operations where there is no airborne noise path or situations where people are located in buildings with substantial sound insulation, such as a recording studios. Groundborne noise is typically quantified using the A-weighted sound level.

The following sections provide an explanation of key concepts and terms used in the analysis of environmental groundborne vibration.

4.10.3.1 Displacement, Velocity, and Acceleration

When a vibration source (blasting, dynamic construction equipment, train, etc.) impacts the ground, it imparts energy to the ground creating vibration waves that propagate away from the source along the surface and downward into the earth. As vibration waves travel outward from a source, they excite the particles of rock and soil through which they pass and cause them to oscillate. The distance that these particles move is referred to as the *displacement* and is typically very small, usually only a few ten-thousandths to a few thousandths of an inch. *Velocity* describes the instantaneous speed of the motion and *acceleration* is the instantaneous rate of change of the speed. Each of these measures can be further described in terms of *frequency* and *amplitude*, as discussed below.

Groundborne vibration is most commonly described in terms of velocity or acceleration because displacement does not provide any information about the speed of the vibration. In addition, most transducers used to measure vibration directly measure velocity or acceleration, not displacement.

4.10.3.2 Frequency and Amplitude

The frequency of a vibrating object describes how rapidly it is oscillating. The unit of measurement for the frequency of vibration is Hz (the same as used in the measurement of noise), which describes the number of cycles per second.

The amplitude of displacement describes the distance that a particle moves from its resting (or equilibrium) position as it oscillates and can be measured in inches. The amplitude of vibration velocity (the speed of the movement) can be measured in inches per second (in/s). The amplitude of vibration acceleration (the rate of change of the speed) can be measured in inches per second squared (in/s²).

4.10.3.3 Vibration Descriptors

As noted above, there are various way to quantify groundborne vibration based on its fundamental characteristics. Because vibration can vary markedly over a short period of time, various descriptors have been developed to quantify vibration. The two most common descriptors used in the analysis of groundborne vibration are peak particle velocity and vibration velocity level, each of which are described below.

Peak Particle Velocity (PPV) is defined as the maximum instantaneous positive or negative peak amplitude of the vibration velocity. The unit of measurement for PPV is in/s. Unlike many quantities used in the study of environmental acoustics, PPV is typically presented using linear values and does not employ a dB scale. Because it is related to the stresses that are experienced by buildings, PPV is generally accepted as the most appropriate descriptor for evaluating the potential for building

damage (both the Federal Transit Administration (FTA) and Caltrans guidelines recommend using PPV for this purpose). It is also used in many instances to evaluate the human response to groundborne vibration (Caltrans guidelines recommend using PPV for this purpose).

Vibration Velocity Level (L_V) describes the root-mean-square vibration velocity. Due to the typically small amplitudes of groundborne vibrations, vibration velocity is often expressed in decibels, calculated as follows.

$$L_V = 20 \times \log_{10} \left(\frac{V}{V_{ref}} \right)$$

where V is the actual RMS velocity amplitude and V_{ref} is the reference velocity amplitude. It is important to note that there is no universally accepted value for V_{ref} , but the accepted reference quantity for vibration velocity in the United States is 1 micro-inch per second (1×10^{-6} in/s). The abbreviation VdB is commonly used for vibration decibels to distinguish from noise level decibels. L_V is often used to evaluate human response to vibration levels (FTA guidelines recommend using L_V for this purpose).

4.10.3.4 Vibration Propagation

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations reduce much more rapidly than low frequencies, so that low frequencies tend to dominate the spectrum at large distances from the source. The propagation of groundborne vibration is also influenced by geological variations. Geological factors that influence the propagation of groundborne vibration include the following:

- **Soil Conditions.** The type of soil is known to have a strong influence on the levels of groundborne vibration. Among the most important factors are the stiffness and internal damping of the soil. Hard, dense, and compacted soil, stiff clay soil, and hard rock transmit vibration more efficiently than loose, soft soils, sand, or gravel.
- **Depth to Bedrock.** Shallow depth to bedrock has been linked to efficient propagation of groundborne vibration. One possibility is that shallow bedrock acts to concentrate the vibration energy near the surface, reflecting vibration waves back toward the surface that would otherwise continue to propagate farther down into the earth.
- **Soil Strata.** Discontinuities in the soil strata (i.e., soil layering) can also cause diffractions or channeling effects that affect the propagation of vibration over long distances.
- **Frost Conditions.** Vibration waves typically propagate more efficiently in frozen soils than in unfrozen soils. Propagation also varies depending on the depth of the frost.
- **Water Conditions.** The amount of water in the soil can affect vibration propagation. The depth of the water table in the path of the propagation also appears to have substantial effects on groundborne vibration levels.

Specific conditions at the source and receiver locations can also affect the vibration levels. For instance, how the source is connected to the ground (e.g., direct contact, through rails, or via a structure) will affect the amount of energy transmitted into the ground. There are also notable differences when the source is underground (such as in a tunnel) versus on the surface. At the

receiver, vibration levels can be affected by variables such as the foundation type, the building construction, and the acoustical absorption inside the rooms where people are located. When vibration encounters a building, a ground-to-foundation coupling loss⁴ will usually reduce the overall vibration level. However, under certain circumstances, the ground-to-foundation coupling may also amplify the vibration level due to structural resonances of the floors and walls.

4.10.3.5 Effects of Groundborne Vibration

Vibration can result in effects that range from annoyance to structural damage. Annoyance or disturbance of people may occur at vibration levels substantially below those that would pose a risk of damage to buildings. Each of these effects is discussed below.

Potential Building Damage

When groundborne vibration encounters a building, vibrational energy is transmitted to the structure causing it to vibrate, and, if the vibration levels are high enough, damage to the building may occur. Depending on the type of building and the vibration levels this damage could range from cosmetic architectural damage (e.g., cracked plaster, stucco, or tile) to more severe structural damage (e.g., cracking of floor slabs, foundations, columns, beams, or wells). Buildings can typically withstand higher levels of vibration from transient sources than from continuous or frequent intermittent sources. Transient sources are those that create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment. Older, fragile buildings (which may include important historical buildings) are of particular concern. Modern commercial and industrial buildings can generally withstand much higher vibration levels before potential damage becomes a problem.

Human Disturbance/Annoyance

Groundborne vibration can be annoying to people and can cause serious concern for nearby neighbors of vibration sources, even when vibration is well below levels that could cause physical damage to structures. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible but there is less adverse reaction without the effects associated with the shaking of a building. The normal frequency range of most groundborne vibration that can be felt generally starts from a low frequency of less than 1 Hz to a high of about 200 Hz.

When groundborne vibration waves encounter a building, vibrational energy is transmitted to the building foundation and then propagates throughout the remainder of the structure causing building surfaces (walls, floors, and ceilings) to vibrate. This movement may be felt directly by building occupants and may also generate a low-frequency rumbling noise as sound waves are radiated by the vibrating surfaces. At higher frequencies, building vibration can cause other audible effects such as rattling of windows, building fixtures, or items on shelves or hanging on walls. These audible effects due to groundborne vibration are referred to as groundborne noise. Groundborne vibration levels that result in groundborne noise are often experienced as a combination of

⁴ A loss is experienced at the interface between the soil and the structure because not all of the vibrational energy will be transmitted into the foundation. Some vibration waves will be refracted around the foundation or be reflected back into the soil.

perceptible vibration and low-frequency noise. However, sources that have the potential to generate groundborne noise are likely to produce airborne noise impacts that mask the radiated groundborne noise. Any perceptible effect (vibration or groundborne noise) can lead to annoyance. The degree to which a person is annoyed depends on the activity in which they are participating at the time of the disturbance. For example, someone sleeping or reading will be more sensitive than someone who is engaged in any type of physical activity. Recurring vibration effects often lead people to believe that the vibration is damaging their home, although vibration levels are well below minimum thresholds for damage potential (Caltrans 2020).

Numerous studies have been conducted to characterize the human response to vibration, and, over the years, numerous vibration criteria and standards have been suggested by researchers, organizations, and governmental agencies. These studies suggest that the thresholds for perception and annoyance vary according to duration, frequency, and amplitude of vibration. For transient vibration sources (single isolated vibration events such as blasting), the human response to vibration varies from barely perceptible at a PPV of 0.04 in/s, to distinctly perceptible at a PPV of 0.25 in/s, and severe at a PPV of 2.0 in/s. For continuous or frequent intermittent vibration sources (such as impact pile driving or vibratory compaction equipment), the human response to vibration varies from barely perceptible at a PPV of 0.01 in/s, to distinctly perceptible at a PPV of 0.04 in/s, and severe at a PPV of 0.4 in/s (Caltrans 2020).

4.10.3.6 Vibration-Sensitive Land Uses

As discussed above, the potential effects of groundborne vibration can be divided into two categories: building damage and potential human disturbance/annoyance. Because building damage would be considered a permanent negative effect at any building, regardless of land use, any type of building would typically be considered sensitive to this type of impact. Fragile structures, which often include historical buildings, are most susceptible to damage and are of particular concern. Older buildings

Sensitivity to human disturbance/annoyance caused by vibration varies by land use and time of day. Vibration effects are typically only considered inside occupied buildings and not at outside areas such as residential yards, parks, or open space. As such, the District does not consider parks to be vibration-sensitive, but may consider any occupied buildings within parks to be sensitive to vibration. The District considers the following building types to be vibration sensitive with respect to potential disturbance of occupants:

- **Residences** (including hospitals, nursing facilities, or intermediate care facilities with overnight patient stays).
- **Schools and childcare facilities** are typically only considered vibration sensitive during daytime and evening hours when children are inside or special events occur inside during the evening.
- **Hotels and other guest lodgings** are typically only considered noise sensitive during the evening and nighttime hours (i.e., of 7:00 p.m. to 7:00 a.m.) due to overnight accommodation expectations of hotel guests. However, hotels and other guest lodgings are not considered noise sensitive during the daytime hours due to the transient nature of their use during the day.

4.10.4 Existing Conditions

Due to the large geographical area and varied land uses within the planning area, the existing noise environment varies widely at and around the Port. Notable noise sources include the following.

- Transportation sources such as traffic, aircraft (civilian and military), watercraft (recreational, commercial, and military), and rail (passenger, freight, and trolley).
- Industrial activities such as ship operations and cargo-handling activities at and around Port terminals; shipbuilding and repair; manufacturing activities; and storage, loading, and shipping operations.
- Activities at various Navy installations.
- Commercial and recreational activities such as operations at the San Diego Convention Center, area hotels, restaurants, parks, marinas, and cruise ship terminals.

4.10.4.1 Noise Monitoring

In order to quantify the existing ambient noise conditions, long-term (LT) and short-term (ST) noise monitoring was conducted at multiple locations near or within the analyzed PMPU planning districts (PDs). The locations were selected primarily to represent noise-sensitive land uses such as residences, hotels, schools, and parks. Where access could be secured, measurements were taken directly on the subject property; otherwise, measurements were obtained at adjacent accessible public areas such as promenades or sidewalks that were determined to be acoustically equivalent (i.e., that experienced approximately the same noise exposure from the same ambient noise sources). These locations are considered representative of other noise-sensitive receptors in proximity thereto. Long-term measurements were set up to gather hourly data for at least 24 hours. Short-term measurements were approximately 15 to 30 minutes in duration. Each measurement location is identified with a label that indicates the measurement duration (LT for long-term or ST for short-term) and relevant planning district. For example measurements starting with "LT01" are long-term measurements conducted in or near PD1, and measurements starting "ST04" are short-term measurements conducted in or near PD4. All measurement locations are indicated on Figure 4.10-1. The locations were selected to document the existing noise environment in or near the eight planning districts considered in this Program Environmental Impact Report (PEIR) (i.e., PD1, PD2, PD3, PD4, PD7, PD8, PD9, and PD10). The sound level meters (SLM) used for both the long- and short-term noise monitoring were field-calibrated prior to each measurement to ensure accuracy, using a Larson Davis CAL200 acoustical calibrator; the calibration was also re-checked at the conclusion of each measurement. All measurement microphones were fitted with a wind screen to reduce the effects of wind-related interference. Field noise survey sheets are provided in Appendix H.

Long-Term Noise Measurements

Long-term ambient noise measurements were conducted at 15 locations near or within the analyzed planning districts. Type 2 SLM⁵ were used to capture daily noise level patterns and statistics continuously over 1-hour intervals. Complete noise measurement data are provided in Appendix H.

⁵ Models Piccolo SLM-P3 and Piccolo II SLM manufactured by Soft dB and Model NL-21 manufactured by Rion. Type 2 sound level meters are considered general-purpose grade for field use.

Table 4.10-3 summarizes the results of the long-term noise measurements in terms of the range of daytime (7 a.m. to 7 p.m.), evening (7 p.m. to 10 p.m.), and nighttime (10 p.m. to 7 a.m.) average noise levels (L_{eq}); maximum noise levels (L_{max}); and CNEL. A description of each measurement is provided below. These locations are considered representative of other receptors in proximity thereto.

LT01-1. Harbor Police Department, Shelter Island Station (within PD1). The measurement microphone was mounted on a tripod, approximately 5 feet above the ground within a chain-link fenced storage area on the east side of the police station building. This location had unobstructed views of San Diego Bay to the east and south.

LT01-2. Shelter Island Shoreline Park (within PD1). The SLM was mounted on a tree in the park, approximately 8 feet above the ground, across the street from the Best Western Plus Island Palms Hotel on Shelter Island.

LT02-1. Harbor Island Park (within PD2). The SLM was mounted on a tree in the park, approximately 8 feet above the ground, located at the south side of Harbor Island West, across the street from the Marina Cortez parking lot.

LT03-1. Wyndham San Diego Bayside (within PD3). The SLM was mounted on a tree, approximately 7 feet above the ground, 15 feet south of the Wyndham San Diego Bayside Hotel at the approximate setback of the hotel rooms from North Harbor Drive.

LT03-2. B Street Pier (within PD3). The measurement microphone was mounted on a tripod, approximately 5 feet above the ground on the west end of the B Street Pier with an unobstructed view of the Bay to the west.

LT03-3. Marriott Marquis San Diego Hotel and Marina (within PD3). The SLM was mounted on a light pole, approximately 9 feet above the ground, adjacent to the Embarcadero Promenade south of the Marriott Marquis San Diego Hotel along the marina.

LT03-4. Harbor Club San Diego (approximately 160 feet northeast of PD3). The SLM was mounted on a light pole, approximately 9 feet above the ground on the west side of 3rd Avenue, just north of K Street. This location is adjacent to the Harbor Club condominium towers at 100 Harbor Drive with direct line of sight to the San Diego Convention Center to the southwest with Harbor Drive, the trolley line, railroad tracks, and the Martin Luther King Promenade in between.

LT03-5. Embarcadero Marina Park South (within PD3). The SLM was mounted on a tree approximately 7 feet above the ground at the easternmost corner of Embarcadero Marina Park South.

LT04-1. Cesar Chavez Park (within PD4). The SLM was mounted on a tree, approximately 8 feet above the ground, adjacent to a seating area within Cesar Chavez Park.

LT04-2. Mercado Apartments (approximately 1,140 feet northeast of PD4). The SLM was mounted on a tree in the parking lot at the southwest corner of the Mercado Apartments at 2001 Newton Avenue.

LT04-3. 2644 Boston Avenue (approximately 800 feet northeast of PD4). The measurement microphone was mounted on a tripod, approximately 5 feet above the ground within the yard of a single-family residence at 2644 Boston Avenue.

LT08-1. Imperial Beach Lifeguard Tower (within PD8). The measurement microphone was mounted on a tripod, approximately 5 feet above the exterior deck of the lifeguard tower at the Dempsey Holder Safety Center in Imperial Beach. The deck was on the third floor of the tower with an unobstructed view of the ocean and the Imperial Beach Pier to the west.

LT09-1. Residential neighborhood on Kingston Court (approximately 220 feet west of PD9). The SLM used for this measurement was mounted on a tree, approximately 8 feet above the ground, within an open landscaped area on Kingston Court.

LT10-1. Coronado Municipal Golf Course (within PD10). The SLM was mounted on a tree, approximately 9 feet above the ground, facing south toward Glorietta Bay with unobstructed views of San Diego Bay and Glorietta Bay to the east and south. This location was close to the fence on the side of the golf course's driving range.

LT10-2. Coronado Tidelands Park (within PD10). The SLM was mounted on a tree at the northeast corner of Coronado Tidelands Park, approximately 90 feet west of San Diego Bay and 50 feet south of guest accommodations at the Coronado Island Marriott Resort and Spa.

Short-Term Noise Measurements

Short-term measurement locations were selected to supplement long-term measurements near or within the analyzed planning districts. Short-term noise measurements were conducted at 15 locations using a Type 1 SLM.⁶ Each measurement lasted between 15 and 30 minutes and was conducted with the meter mounted on a tripod at a height of 5 feet above the ground, with a wind screen to reduce the effects of wind-related interference. Complete noise measurement data are provided in Appendix H. Table 4.10-3 summarizes the results of the short-term noise measurements in terms of average noise levels (L_{eq}) and maximum noise levels (L_{max}). Short-term monitoring locations and noise conditions at the time of the measurements are described below. These locations are considered representative of other receptors in proximity thereto.

ST01-1. Holiday Inn San Diego Bayside (within PD1). The SLM was positioned 11 feet northwest of the hotel at the approximate setback of the guest rooms from Nimitz Boulevard. The dominant noise sources at this location were traffic on Nimitz Boulevard and frequent overflying aircraft. Additional noise sources included people talking at the hotel pool and hotel maintenance crew activity.

ST02-1. Sheraton San Diego Hotel & Marina (within PD2). The SLM was positioned 17 feet south of the hotel, at the approximate setback of the guest rooms from Harbor Island Drive. The dominant noise source at this location was traffic on Harbor Island Drive. Additional noise sources included distant overflying commercial aircraft and bird vocalizations.

ST03-1. Manchester Grand Hyatt San Diego (within PD3). The SLM was positioned 30 feet northwest of the hotel, at the approximate setback of the guest rooms from Martin Luther King Promenade. The dominant noise source at this location was traffic on Martin Luther King Promenade. Additional noise sources included occasional light rail trains passing by and pedestrian traffic.

ST03-2. Embarcadero Marina Park North (within PD3). The SLM was positioned 66 feet southeast of the gazebo located near the southeastern end of the Embarcadero Marina Park North, at the

⁶ Models 831, LxT1, and LxT2 manufactured by Larson Davis.

approximate setback of the gazebo and usable area of park. The dominant noise sources at this location were from pedestrian traffic and passing boats in San Diego Bay. Other noise sources included distant industrial noise, distant aircraft noise, distant traffic noise from Martin Luther King Promenade, and bird vocalizations.

ST03-3. Fifth Avenue Landing Park (within PD3). The SLM was positioned near the center of the park, approximately 35 yards east of San Diego Bay. The noise environment was defined primarily by overflying aircraft. Other sources present included watercraft (both civilian and military), distant intermittent traffic passing by on Park Boulevard and Harbor Drive, and pedestrian traffic along the Bay and in front of the Hilton San Diego Bayfront Hotel.

ST03-4. Hilton Bayfront Hotel (within PD3). The SLM was located on the Embarcadero Promenade immediately southwest of the hotel, adjacent to the pool area, approximately 130 yards south of the Park Boulevard Pier. The noise environment was defined almost entirely by activities at the neighboring Tenth Avenue Marine Terminal to the southeast. Other sources included watercraft (both civilian and military) and activities at the hotel pool.

ST04-1. Monarch School (approximately 380 feet east of PD4). The SLM was positioned near the outdoor use area of Monarch School, 10 feet southwest from the fence that separates the school from the parking lot of the industrial building located southwest of the school. The noise sources at this location were distant traffic on East Harbor Drive and children playing in the play area of the school.

ST04-2. Perkins Elementary School (approximately 1,030 feet northeast of PD4). The SLM was positioned on the sidewalk adjacent to the southeast corner of the school, near the intersection of Beardsley Street and Main Street. The dominant noise source at this location was roadway traffic and rail traffic. Additional noise sources included distant pedestrian conversation.

ST04-3. 1843 Newton Avenue (approximately 1,350 feet northeast of PD4). The SLM was positioned in front of 1843 Newton Avenue, 10 feet from the street curb. The dominant noise source at this location was sparse traffic on Newton Avenue. Additional noise sources were from pedestrian traffic and bird song.

ST07-1. Adjacent to Pond 20 (at south boundary of PD7). The SLM was positioned at the northwestern corner of the mobile home park located north of Palm Avenue. The meter was placed near spot 75, 17 feet east of the fence separating the mobile home park from Bayside Palms Mobile Home Village and 4 feet south of the northern fence. The noise sources present in this area included distant aircraft flyovers and birdsong.

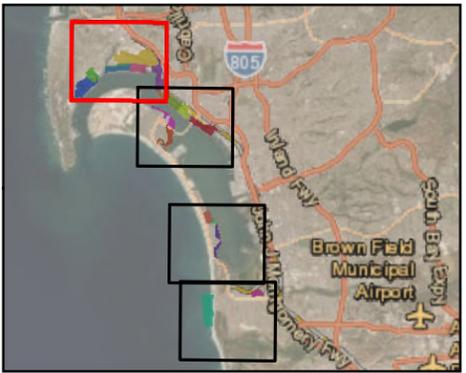
ST08-1. 777 Seacoast Drive (approximately 50 feet east of PD8). The SLM was positioned 11 feet south of the apartment building located at 777 Seacoast Drive, at the approximate setback of the building. The dominant noise source at this location was from traffic on Seacoast Drive. Additional noise sources present included distant aircraft flyovers, children playing at the playground across the street, and bird vocalizations.

ST09-1. Coronado Cays Park (approximately 1,470 feet southwest of PD9). The SLM was positioned 55 feet south of the seating area located near the southern end of Coronado Cays Park, at the approximate setback of the park benches from Coronado Cays Boulevard. The dominant noise source at this location was from traffic on Coronado Cays Boulevard. Additional noise sources present included distant aircraft flyovers.

ST10-1. 1536 Glorietta Boulevard (approximately 140 feet west of PD10). The SLM was positioned 15 feet northeast of the single-family residence located at 1536 Glorietta Boulevard, at the approximate setback of the home. The dominant noise source at this location was from traffic on Pomona Avenue. Additional noise sources present included distant rustling leaves on trees and bird vocalizations.

ST10-2. Centennial Park (at southwest boundary of PD10). The SLM was mounted on a sign post, approximately 7 feet above the ground. The meter was positioned approximately 90 feet southwest of the water, at the approximate setback of the Coronado Point Apartments, 75 yards from the pool of the apartment complex. The noise environment within the park was defined primarily by foot traffic and watercraft (both civilian and military). Other sources present included people talking at picnic areas within the park and activity at nearby hotel pools.

ST10-3. Harborview Park (approximately 290 feet southwest of PD10). The SLM was positioned in the park, 21 feet southeast from the fence line of the single-family residence at 817 First Street, at the approximate setback of the home from First Street. The primary noise source at this location was from traffic on First Street. On occasion, jet engine noise from the nearby Naval Air Station would dominate the noise environment during aircraft takeoff. Additional noise sources included distant commercial aircraft and bird vocalizations.



- Legend**
- Long-Term Noise Measurement Locations
 - Short-Term Noise Measurement Locations
- Planning District Boundaries**
- PD 1 – West Shelter Island
 - PD 1 – East Shelter Island
 - PD 2 – San Diego International Airport
 - PD 2 – West Harbor Island
 - PD 2 – East Harbor Island
 - PD 2 – Spanish Landing
 - PD 2 – Pacific Highway Corridor
 - PD 3 – North Embarcadero
 - PD 3 – Central Embarcadero
 - PD 3 – South Embarcadero

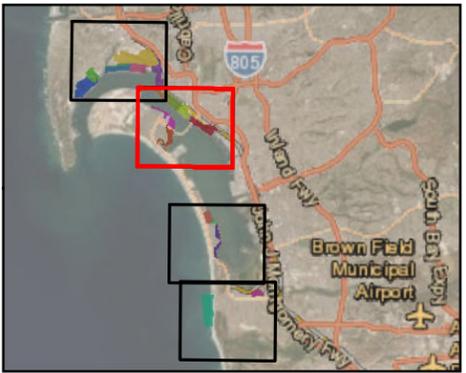
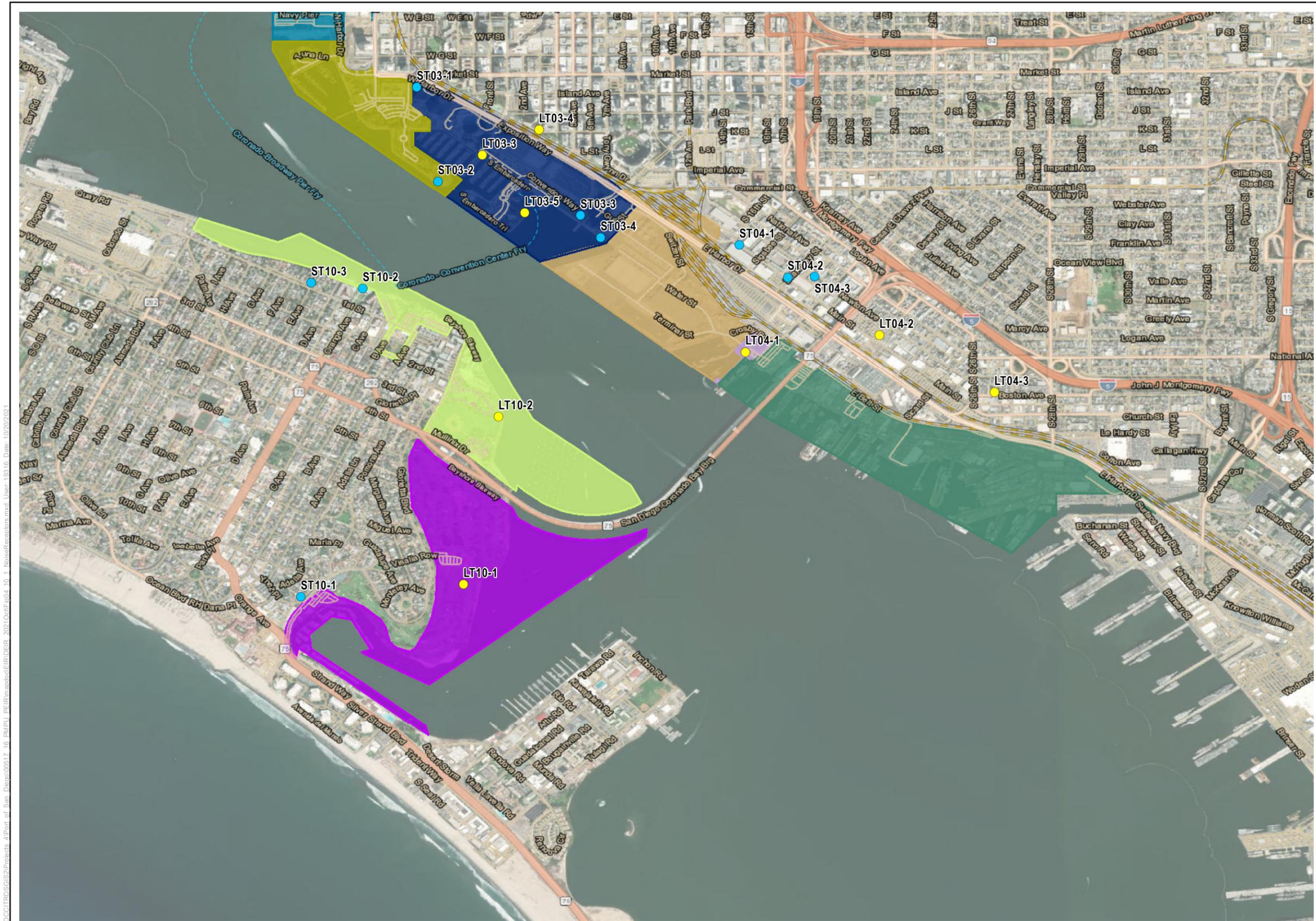
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Source: ICF; ESRI 2020



Figure 4.10-1 Sheet 1
Noise Measurement Locations
Port Master Plan Update

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- Legend**
- Long-Term Noise Measurement Locations
 - Short-Term Noise Measurement Locations
- Planning District Boundaries**
- PD 3 – North Embarcadero
 - PD 3 – Central Embarcadero
 - PD 3 – South Embarcadero
 - PD 4 – Harbor Drive Industrial
 - PD 4 – Cesar Chavez Park
 - PD 4 – Tenth Avenue Marine Terminal
 - PD 10 – North Coronado
 - PD 10 – South Coronado

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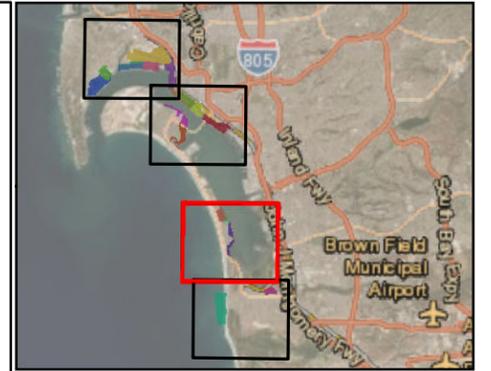
Source: ICF; ESRI 2020



Figure 4.10-1 Sheet 2
Noise Measurement Locations
Port Master Plan Update

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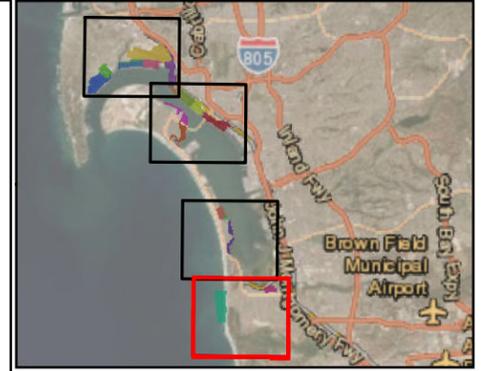
- Legend**
- Long-Term Noise Measurement Locations
 - Short-Term Noise Measurement Locations
- Planning District Boundaries**
- PD 7 – Habitat Conservation
 - PD 9 – State Park Basin
 - PD 9 – Grand Caribe Isle and South Cays
 - PD 9 – Crowne Isle

Source: ICF; ESRI 2020



**Figure 4.10-1 Sheet 3
Noise Measurement Locations
Port Master Plan Update**

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Legend

- Long-Term Noise Measurement Locations
- Short-Term Noise Measurement Locations

Planning District Boundaries

- PD 8 – Imperial Beach Oceanfront

Source: ICF; ESRI 2020

**Figure 4.10-1 Sheet 4
Noise Measurement Locations
Port Master Plan Update**

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Table 4.10-3. Summary of Measured Ambient Noise Levels

Site#	Location	Date	Range of CNEL Values (average), dBA	Time of Day ¹	Range of Hourly Leq Values (average), dBA	Range of Lmax Values, dBA
PD1: Shelter Island						
LT01-1	Harbor Police, Shelter Island Station	7/5/2016– 7/6/2016	58.4–59.4 (59.0)	Daytime	53.5–57.6 (55.8)	63.3–71.1
				Evening	43.9–49.4 (47.1)	57.6–60.4
				Nighttime	34.9–55.6 (51.9)	42.1–68.9
LT01-2	Shelter Island Shoreline Park	2/18/20– 2/20/20	62.6–64.2 (63.7)	Daytime	58.8–65.6 (62.4)	71.8–91.0
				Evening	56.6–64.2 (60.4)	70.2–87.0
				Nighttime	45.1–59.5 (53.7)	59.5–78.6
ST01-1	Holiday Inn San Diego Bayside	2/20/20	N/A	3:45 p.m.– 4:05 p.m.	61.6	71.7
PD2: Harbor Island						
LT02-1	Harbor Island Park	2/18/2020– 2/20/2020	63.4–64.5 (64.0)	Daytime	59.4–63.7 (61.3)	73.4–87.9
				Evening	58.2–61.3 (60.4)	73.6–78.9
				Nighttime	45.2–61.7 (55.9)	59.3–81.3
ST02-1	Sheraton San Diego Hotel & Marina	2/20/2020	N/A	2:27 p.m.– 2:47 p.m.	54.2	66.6
PD3: Embarcadero						
LT03-1	Wyndham San Diego Bayside	2/18/2020– 2/20/2020	66.5–67.1 (66.8)	Daytime	61.9–72.1 (64.7)	75.3–102.3
				Evening	59.0–62.5 (61.4)	72.6–81.3
				Nighttime	49.2–63.1 (58.5)	61.4–84.8
LT03-2	B Street Pier	7/5/2016– 7/6/2016	62.1–62.3 (62.2)	Daytime	55.8–62.3 (58.6)	63.7–76.5
				Evening	59.2–61.5 (60.5)	69.4–70.2
				Nighttime	45.6–59.5 (53.9)	49.2–68.9
LT03-3	Marriott Marquis San Diego Hotel and Marina	10/20/2016– 10/24/2016	59.2–62.3 (61.2)	Daytime	52.5–64.4 (58.3)	66.8–89.0
				Evening	53.8–58.9 (56.7)	71.2–85.2
				Nighttime	49.7–57.6 (53.7)	55.2–81.3
LT03-4	Harbor Club San Diego	10/20/2016– 10/24/2016	63.1–68.9 (66.5)	Daytime	57.2–68.4 (61.8)	74.0–93.6
				Evening	57.2–63.1 (61.1)	72.0–88.0
				Nighttime	51.7–66.2 (59.3)	67.8–93.7
LT03-5	Embarcadero Marina Park South	10/20/2016– 10/24/2016	59.6–66.2 (63.6)	Daytime	53.2–72.0 (60.7)	60.9–88.0
				Evening	52.9–57.9 (55.7)	63.2–76.6
				Nighttime	49.0–62.9 (55.5)	55.5–80.8
ST03-1	Manchester Grand Hyatt San Diego	2/21/2020	N/A	11:55 a.m.– 12:15 p.m.	60.9	70.2
ST03-2	Embarcadero Marina Park North	2/21/2020	N/A	12:35 p.m.– 12:55 p.m.	52.5	58.0
ST03-3	Fifth Avenue Landing Park	10/20/2016	N/A	11:34 a.m.– 12:01 p.m.	54.4	72.1
ST03-4	Hilton Bayfront Hotel	10/20/2016	N/A	12:10 p.m.– 12:25 p.m.	59.9	71.2

Site#	Location	Date	Range of CNEL Values (average), dBA	Time of Day ¹	Range of Hourly Leq Values (average), dBA	Range of L _{max} Values, dBA
PD4: Working Waterfront						
LT04-1	Cesar Chavez Park	2/18/2020– 2/20/2020	70.6–71.9 (71.1)	Daytime	61.5–78.0 (68.3)	73.3–95.1
				Evening	61.1–64.4 (62.7)	70.6–83.3
				Nighttime	59.3–65.2 (63.2)	67.5–87.4
LT04-2	Mercado Apartments	1/7/2019– 1/9/2019	68.5–69.4 (69.0)	Daytime	59.1–65.7 (62.7)	69.3–82.9
				Evening	59.0–62.9 (61.7)	70.5–78.9
				Nighttime	56.6–66.1 (61.9)	65.1–81.2
LT04-3	SFR on Boston Avenue	1/7/2019– 1/9/2019	61.0–62.0 (61.8)	Daytime	53.2–60.9 (56.5)	67.6–88.9
				Evening	52.4–56.2 (54.4)	65.1–76.8
				Nighttime	50.4–58.6 (54.5)	63.5–73.5
ST04-1	Monarch School	2/21/2020	N/A	11:05 a.m.– 11:21 a.m.	52.8	66.8
ST04-2	Perkins Elementary	1/9/2019	N/A	9:47 a.m.– 10:07 a.m.	61.2	73.3
ST04-3	SFR on Newton Avenue	2/21/2020	N/A	10:30 a.m.– 10:50 a.m.	54.4	71.0
PD7: South Bay						
ST07-1	Adjacent to Pond 20	2/20/2020	N/A	11:08 a.m.– 11:28 a.m.	48.6	64.1
PD8: Imperial Beach Oceanfront						
LT08-1	Imperial Beach Lifeguard Tower	7/5/2016– 7/6/2016	71.3–71.5 (71.5)	Daytime	64.7–69.1 (66.5)	68.5–83.1
				Evening	66.1–66.2 (66.1)	71.7–71.9
				Nighttime	61.5–66.2 (64.0)	64.0–72.0
ST08-1	MFR on Seacoast Drive	2/20/2020	N/A	10:05 a.m.– 10:25 a.m.	59.0	76.0
PD9: Silver Strand						
LT09-1	Residential on Kingston Court	2/18/2020– 2/20/2020	55.1–56.7 (55.9)	Daytime	49.1–59.1 (54.9)	60.1–82.4
				Evening	51.0–56.4 (53.7)	64.8–73.7
				Nighttime	37.6–51.3 (46.1)	47.5–70.8
ST09-1	Coronado Cays Park	2/20/2020	N/A	12:07 p.m.– 12:27 p.m.	61.1	71.1
PD10: Coronado Bayfront						
LT10-1	Coronado Municipal Golf Course	7/5/2016– 7/6/2016	56.4–57.5 (56.8)	Daytime	49.2–60.9 (55.2)	59.0–79.7
				Evening	49.4–51.3 (50.3)	55.3–58.2
				Nighttime	42.1–55.9 (48.9)	45.0–66.9
LT10-2	Coronado Tidelands Park	1/7/2019– 1/9/2019	63.0–66.5 (65.7)	Daytime	54.7–73.3 (62.6)	61.7–94.7
				Evening	55.9–61.7 (59.5)	67.4–83.7
				Nighttime	51.3–61.5 (57.1)	55.8–75.9
ST10-1	SFR on Glorietta Boulevard	2/21/2020	N/A	8:39 a.m.– 8:59 a.m.	54.8	72.8
ST10-2	Centennial Park	10/20/2016	N/A	Daytime	56.2–64.6 (61.0)	72.1–84.9
				Evening	57.4	73.7

Site#	Location	Date	Range of CNEL Values (average), dBA	Time of Day ¹	Range of Hourly Leq Values (average), dBA	Range of L _{max} Values, dBA
ST10-3	Harborview Park	2/21/2020	N/A	9:22 a.m.– 9:42 a.m.	55.6	71.5

¹ Daytime hours range from 7:00 a.m. to 7:00 p.m., evening hours range from 7 p.m. to 10:00 p.m., and nighttime hours range from 10:00 p.m. to 7:00 a.m.

N/A = not applicable; MFR = multi-family residence; SFR = single-family residence.

Barrio Logan Nighttime Noise Study

In addition to the noise measurements described above, the District commissioned a nighttime noise study for the Barrio Logan community that was published in June 2020 (District 2020). The study was conducted to identify nighttime noise sources in the Barrio Logan community between the hours of 10:00 p.m. and 6:00 a.m., with a focus on 1:00 a.m. to 4:00 a.m., and to recommend measures that avoid, minimize, and/or mitigate adverse nighttime noise-generating sources. This detailed report includes almost 90 pages of noise monitoring results gathered at numerous locations in and around PD4 between the hours of 12:00 a.m. and 6:00 a.m. on all days of the week. No daytime or evening noise levels were reported as part of the study. Table 4.10-4 summarizes nighttime noise levels measured at eight sites with continuous noise monitoring between 12:00 a.m. and 6:00 a.m. repeated over multiple days. These locations are considered representative of other receptors in proximity thereto.

Table 4.10-4. Summary of Barrio Logan Nighttime Noise Levels, 12:00 a.m. to 6:00 a.m.

Site	Location (Nearest Cross Streets)	Date	Range of Typical Hourly Leq Values, dBA	Average for All Measured Hours, dBA
A	Main Street and Beardsley Street	10/25 to 10/31 and 11/11 to 11/24, 2019	55-70	62.6
B	National Avenue and Cesar Chavez Parkway	10/25 to 10/31 and 11/11 to 11/24, 2019	55-69	60.7
C	National Avenue and Evans Street	10/25 to 10/31 and 11/11 to 11/24, 2019	47-60	55.6
D	Harbor Drive south of SR-75	10/25 to 10/31 and 11/11 to 11/24, 2019	61-75	68.1
E	Newton Avenue and Sicard Street	10/25 to 10/31 and 11/11 to 11/24, 2019	53-66	59.5
F	28 th Street and Harbor Drive	10/25 to 10/31 and 11/11 to 11/24, 2019	62-78	70.9
G	Boston Avenue and 32 nd Street	10/25 to 10/31, 2019	54-65	58.6
H	Main Street and 28 th Street	11/11 to 11/24, 2019	54-64	60.8

Source: District 2020. Refer to full report for additional data and measurement details.

4.10.4.2 Traffic Noise

Existing traffic noise in the study area was analyzed based on data from the Transportation Impact Analysis (TIA) for the proposed PMPU (Appendix D), using a proprietary traffic noise model, with calculations based on data from the Federal Highway Administration (FHWA) Traffic Noise Model, Version 2.5, Look-Up Tables (FHWA 2004). The methodology is described in further detail in Section 4.10.6.1, *Methodology*. The results are summarized in Table 4.10-5, and the noise modeling is provided in Appendix H.

Table 4.10-5. Existing Modeled Traffic Noise Levels

Roadway	Segment	Existing Traffic Noise Levels (dB, CNEL) ¹
PD1: Shelter Island		
N Harbor Drive	Scott St to Nimitz Blvd	67.8
Scott Street	Shelter Island Dr to N Harbor Dr	64.1
Shelter Island Drive	Shelter Island Dr (northbound) to Northern Terminus	51.7
Shelter Island Drive	Shelter Island Dr (southbound) to Northern Terminus	51.6
Shelter Island Drive	Shelter Island Dr to Southern Terminus	58.6
Shelter Island Drive	Scott St to Pedestrian Crosswalk	60.1
Shelter Island Drive	Pedestrian Crosswalk to Roundabout	60.5
Nimitz Boulevard	Rosecrans St to N Harbor Dr	64.7
PD2: Harbor Drive		
N Harbor Drive	Nimitz Blvd to Terminal 2/Spanish Landing	71.6
N Harbor Drive	Terminal 2/Spanish Landing to Harbor Island Dr	72.1
N Harbor Drive	Harbor Island Dr to Winship Ln	74.5
N Harbor Drive	Winship Ln to Liberator Way	76.7
N Harbor Drive	Liberator Way to W Laurel St	75.8
Harbor Island Drive	N Harbor Dr to Harbor Island Dr Southern Terminus	64.8
Harbor Island Drive	Western Terminus to Harbor Island Dr	61.7
Harbor Island Drive	Harbor Island Dr to Eastern Terminus	60.0
PD3: Embarcadero		
N Harbor Drive	W Laurel St to W Hawthorn St	73.3
N Harbor Drive	W Hawthorn St to W Grape St	69.6
N Harbor Drive	W Grape St to W Ash St	63.7
N Harbor Drive	W Ash St to W Broadway	62.6
N Harbor Drive	Broadway to W G St	61.7
N Harbor Drive	W G St to Pacific Hwy	61.7
W Harbor Drive	Pacific Hwy to Kettner Blvd	63.4
W Harbor Drive	Kettner Blvd to W Market St	68.7
W Harbor Drive	W Market St to Front St	68.5
W Harbor Drive	Front St to First Ave	70.4
E Harbor Drive	First Ave to Convention Center Ct	70.2

Roadway	Segment	Existing Traffic Noise Levels (dB, CNEL)¹
E Harbor Drive	Convention Center Ct to Fifth Ave	70.2
E Harbor Drive	Fifth Ave to Park Blvd	70.5
Pacific Highway	W Laurel St to W Hawthorn St	64.9
Pacific Highway	W Hawthorn St to W Grape St	65.2
Pacific Highway	W Grape St to W Ash St	66.2
Pacific Highway	W Ash St to W Broadway	65.8
W Laurel Street	N Harbor Dr to Pacific Hwy	71.4
W Hawthorn Street	N Harbor Dr to Pacific Hwy	69.9
W Grape Street	N Harbor Dr to Pacific Hwy	69.6
W Ash Street	N Harbor Dr to Pacific Hwy	63.0
Broadway Street	N Harbor Dr to Pacific Hwy	64.2
PD4: Working Waterfront		
E Harbor Drive	Park Blvd to Cesar Chavez Pkwy	71.1
E Harbor Drive	Cesar E Chavez Pkwy to Sampson St	67.9
E Harbor Drive	Sampson St to Schley St	67.2
E Harbor Drive	Schley St to 28th St	66.8
E Harbor Drive	28th St to Belt St	68.3
E Harbor Drive	Belt St to National City Boundary	68.9
PD8: Imperial Beach Oceanfront		
Seacoast Drive	Palm Ave to Imperial Beach Blvd	57.7
PD9: Silver Strand		
Coronado Bay Road	East of Silver Strand Blvd	58.0
PD10: Coronado Bayfront		
Orange Avenue	Pomona Ave to Avenida Del Sol	69.6

Source: Appendix H.

¹ At 50 feet from roadway centerline.

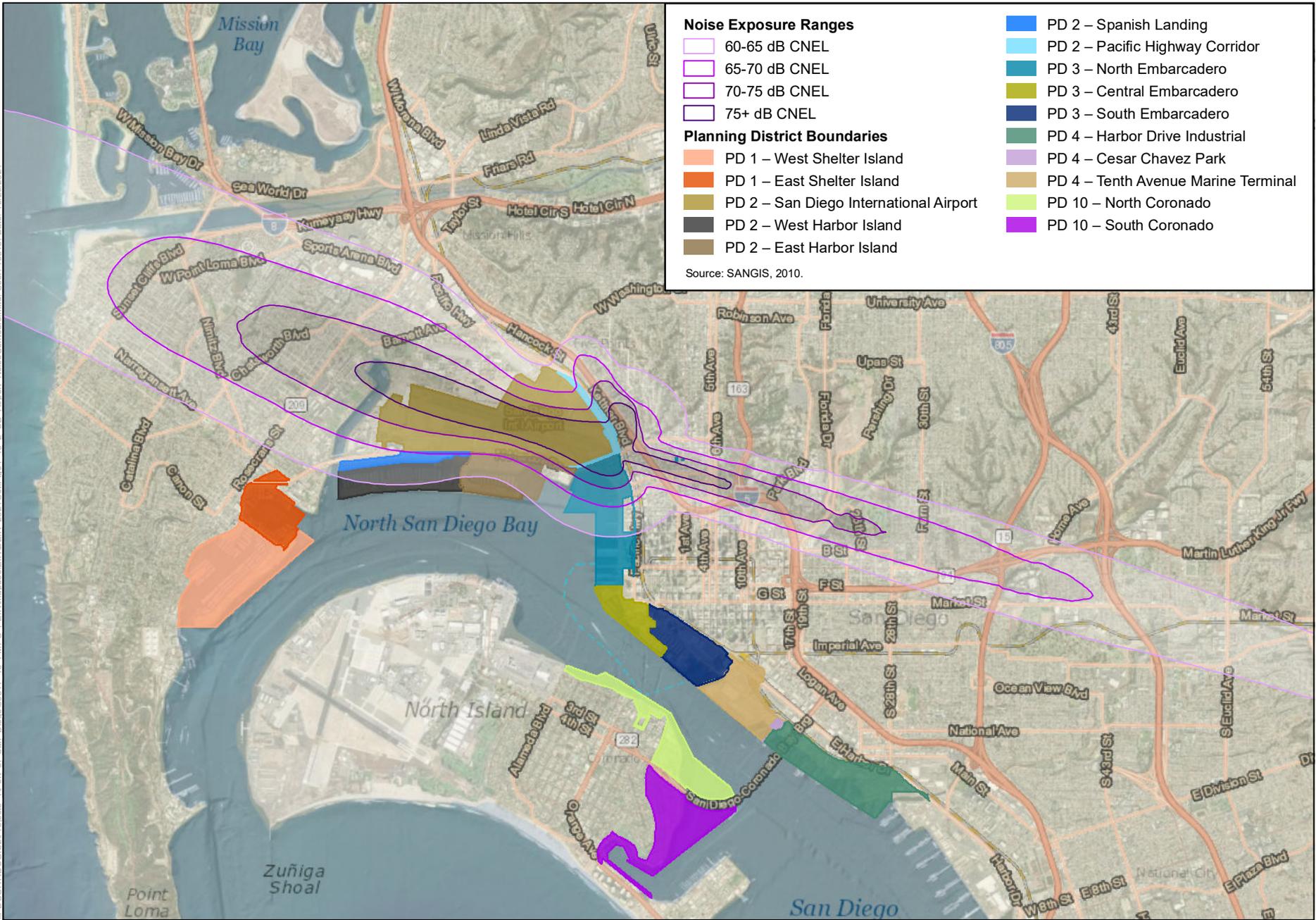
Note: There are no roadway segments in the traffic study area that are located in, or adjacent to, PD7 that were included within the study area.

4.10.4.3 Aircraft Noise

Aircraft from various civilian and military installations (airports/airfields) contribute to existing ambient noise levels within the planning area. Noise contours for each airport/airfield are published in their Airport Land Use Compatibility Plans (ALUCPs) or Air Installations Compatible Use Zones (AICUZ) studies. A review of these sources indicates that the proposed PMPU area is affected by notable noise contours (60 dB CNEL or higher) from both the San Diego International Airport (SDIA) and Naval Air Station (NAS) North Island. Noise contour maps for each of these are shown in Figures 4.10-2 and 4.10-3. Also nearby (but without noise contours that overlap the PMPU area) is Naval Outlying Landing Field (NOLF) Imperial Beach.

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Noise Exposure Ranges

- 60-65 dB CNEL
- 65-70 dB CNEL
- 70-75 dB CNEL
- 75+ dB CNEL

Planning District Boundaries

- PD 1 – West Shelter Island
- PD 1 – East Shelter Island
- PD 2 – San Diego International Airport
- PD 2 – West Harbor Island
- PD 2 – East Harbor Island
- PD 2 – Spanish Landing
- PD 2 – Pacific Highway Corridor
- PD 3 – North Embarcadero
- PD 3 – Central Embarcadero
- PD 3 – South Embarcadero
- PD 4 – Harbor Drive Industrial
- PD 4 – Cesar Chavez Park
- PD 4 – Tenth Avenue Marine Terminal
- PD 10 – North Coronado
- PD 10 – South Coronado

Source: SANGIS, 2010.

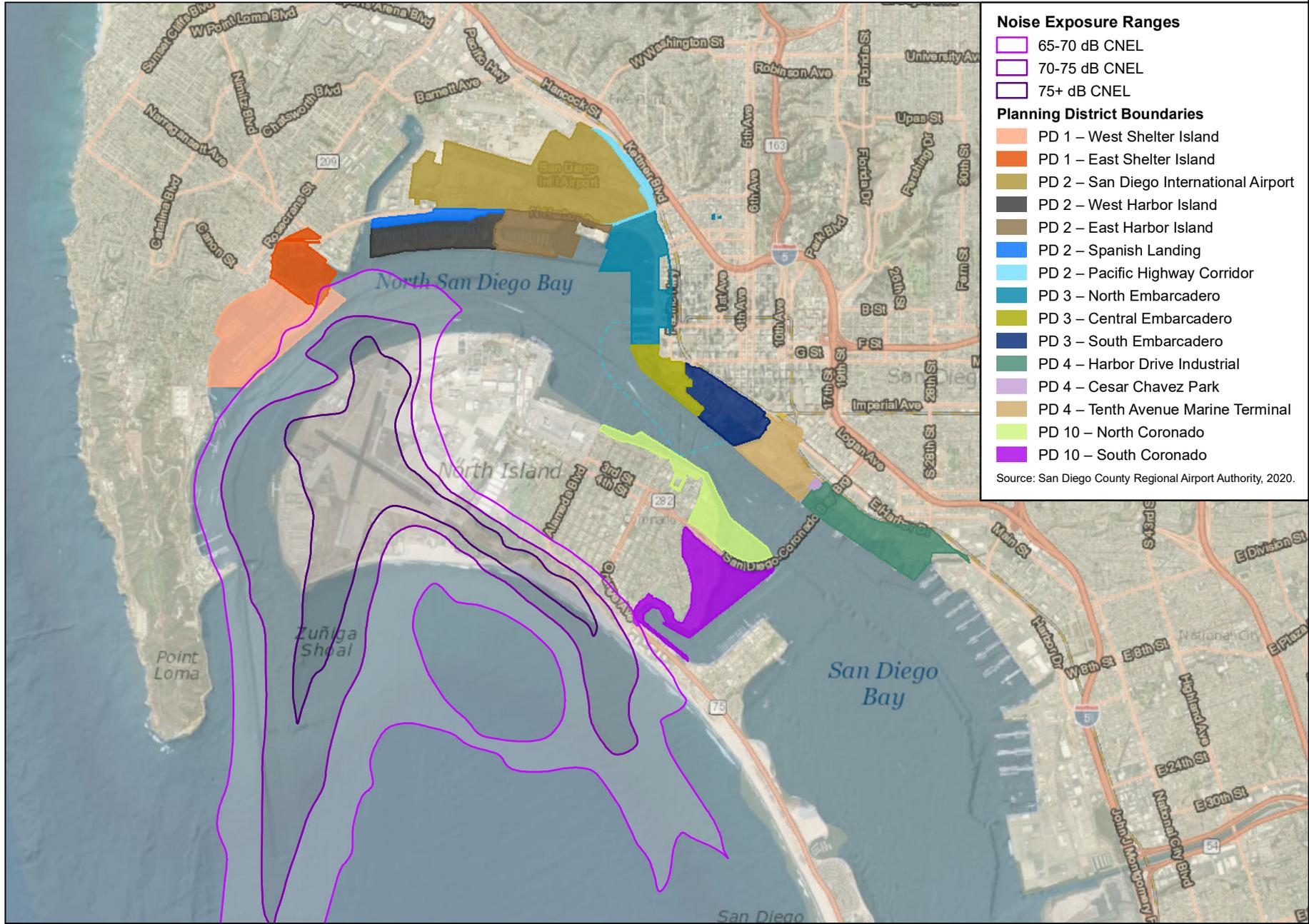


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 Feet
 1 inch = 6,000 feet

Figure 4.10-2
San Diego International Airport Noise Contour Map
Port Master Plan Update

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 1 inch = 6,000 feet

Figure 4.10-3
Naval Air Station North Island Noise Contour Map
Port Master Plan Update

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4.10.5 Laws, Regulations, Plans, and Policies

The District has not formally adopted noise or vibration standards. Therefore, the following sections discuss various laws, regulations, and guidelines related to noise and vibration.

4.10.5.1 Federal Standards

Noise Control Act of 1972

The Federal Noise Control Act of 1972 (Public Law 92 574) established a requirement that all Federal agencies administer their programs to promote an environment free of noise that would jeopardize public health or welfare. The U.S. Environmental Protection Agency (EPA) was given responsibility for the following.

- Providing information to the public regarding identifiable effects of noise on public health and welfare.
- Publishing information on the levels of environmental noise that will protect the public health and welfare with an adequate margin of safety.
- Coordinating Federal research and activities related to noise control.
- Establishing Federal noise emission standards for selected products distributed in interstate commerce.

As part of its responsibility, EPA published *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* in 1974 (EPA 1974). This report identifies sound levels less than or equal to 55 L_{dn} as being appropriate outdoors for residential areas and other places in which quiet is a basis for uses to avoid annoyance and interference with outdoor activity (EPA 1974).

4.10.5.2 State Regulations

California requires each city and county to perform noise studies and implement a noise element as part of its general plan. The purpose of regulating noise is to limit the exposure of a community to excessive noise levels. The State provides guidelines for evaluating the compatibility of various land uses as a function of community noise exposure.

Title 24, California Code of Regulations

Title 24, Part 2, Section 1206.3 of the California Code of Regulations, "Allowable interior noise levels," establishes minimum noise insulation standards to protect people in new hotels, motels, lodging houses, apartments, dwellings, dormitories, condominiums, shelters for homeless persons, congregate residences, employee housing, factory-built housing, and other types of dwelling containing sleeping accommodations. Under this regulation, interior noise levels attributable to exterior noise sources cannot exceed 45 dB CNEL or L_{dn} in any habitable room (the noise metric must be either L_{dn} or CNEL, consistent with the noise element of the local general plan). Compliance

with the code is achieved through various noise attenuation features including building insulation, sound-rated doors and windows.

California Department of Transportation

Some (but not all) of the local regulations discussed below provide standards regarding groundborne vibration. However, these standards are generally quite conservative because they restrict acceptable vibration to the limit of human perception. While this may represent a reasonable goal for vibration from long-term project operations, it is overly restrictive for vibration from short-term temporary construction activity. Caltrans has produced the widely referenced *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020) that specifically addresses potential groundborne vibration impacts from construction. This manual provides guidance for two types of potential impact: (1) damage to structures and (2) annoyance to people. Guideline criteria for each are provided in Tables 4.10-6 and 4.10-7.

Table 4.10-6. Caltrans Guideline Vibration Damage Criteria

Structure and Condition	Maximum PPV (in/s)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2020.

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 4.10-7. Caltrans Guideline Vibration Annoyance Criteria

Human Response	Maximum PPV (in/s)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2020.

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

4.10.5.3 Local

County of San Diego

San Diego County Code of Regulatory Ordinances – Operational Noise

Title 3, Division 6, Chapter 4 of the San Diego County Code of Regulatory Ordinances provides the Noise Abatement and Control regulations for operational noise. Section 36.404 makes it unlawful for any person to cause or allow the creation of any operational noise that exceeds the 1-hour average sound level limits in Table 4.10-8 when measured at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise.

Table 4.10-8. County of San Diego Noise Limits

Land Use Zone	Time of Day	1-Hour L_{eq} (dBA)
RS, RD, RR, RMH, A70, A72, S80, S81, S90, S92, RV, and RU with a General Plan Land Use Designation density of less than 10.9 dwelling units per acre. ¹	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
RRO, RC, RM, S86, FB-V5, RV and RU with a General Plan Land Use Designation density of 10.9 or more dwelling units per acre. ²	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
S94, FB-V4, AL-V2, AL-V1, AL-CD, RM-V5, RM-V4, RM-V3, RM-CD and all commercial zones. ³	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
M50, M52, and M54. ⁴	Anytime	70
S82, M56, and M58. ⁵	Anytime	75

Source: San Diego County Code of Regulatory Ordinance.

¹ Low-density residential use that is not representative of typical land uses in the proposed PMPU area.

² Residential use that is more representative of typical land uses in the proposed PMPU area.

³ General commercial land uses.

⁴ General and limited-impact industrial uses.

⁵ High-impact industrial and extractive uses.

Notes:

The sound level limit at a location on a boundary between two zones is the arithmetic mean of the respective limits for the two zones.

The table has been condensed to remove categories that only applied to specific geographic areas that are not relevant to the proposed PMPU.

These operational noise limits are not applicable to emergency work, school related noise, permitted sports, entertainment, and public events, emergency generators, agricultural activities, preempted State and Federal activities (which typically include operation of airplanes, ships, trains, and vehicles on public roads) (Section 36.417).

San Diego County Code of Regulatory Ordinances – Construction Noise

The County's code regulates both the permissible times of construction activities and the noise levels these activities can generate. Section 36.408 prohibits construction between the hours of 7:00 p.m. and 7:00 a.m. on any day or on Sundays or holidays. Section 36.409 provides construction noise limits, making it unlawful for any person to conduct any construction activity that exceeds an average sound level of 75 dBA for an 8-hour period, between 7:00 a.m. to 7:00 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

City of San Diego

City of San Diego General Plan

The City of San Diego General Plan, Noise Element, provides information, goals, and policies related to the noise environment within the city. The Noise Element presents Land Use – Noise Compatibility Guidelines for the compatibility of various land uses with different noise exposures, defined using the CNEL. There are three different tiers of compatibility: (1) Compatible, (2) Conditionally Compatibility, and (3) Incompatible. The compatibility is described in the City of San Diego’s Table NE-3, which is reproduced, below, as Table 4.10-9. As part of the table, interior noise standards are provided for certain noise-sensitive land uses to ensure adequate exterior-to-interior noise reduction is provided if these uses are located within “Conditionally Compatibility” noise environments.

Table 4.10-9. City of San Diego General Plan Land Use – Noise Compatibility Guidelines

Land Use Category	Exterior Noise Exposure (dBA CNEL)			
	60	65	70	75
<i>Parks and Recreational</i>				
Parks, Active and Passive Recreation				
Outdoor Spectator Sports, Golf Courses; Water Recreational Facilities; Indoor Recreation Facilities				
<i>Agricultural</i>				
Crop Raising & Farming; Community Gardens, Aquaculture, Dairies; Horticulture Nurseries & Greenhouses; Animal Raising, Maintain & Keeping; Commercial Stables				
<i>Residential</i>				
Single Dwelling Units; Mobile Homes		45		
Multiple Dwelling Units <i>*For uses affected by aircraft noise, refer to City Policies NE-D.2. & NE-D.3.</i>		45	45 *	
<i>Institutional</i>				
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Child Care Facilities		45		
Other Educational Facilities including Vocational/Trade Schools and Colleges and Universities		45	45	
Cemeteries				
<i>Retail Sales</i>				
Building Supplies/Equipment; Food, Beverages & Groceries; Pets & Pet Supplies; Sundries, Pharmaceutical, & Convenience Sales; Wearing Apparel & Accessories			50	50
<i>Commercial Services</i>				
Building Services; Business Support; Eating & Drinking; Financial Institutions; Maintenance & Repair; Personal Services; Assembly & Entertainment (includes public and religious assembly); Radio & Television Studios; Golf Course Support			50	50
Visitor Accommodations		45	45	45
<i>Offices</i>				
Business & Professional; Government; Medical, Dental & Health Practitioner; Regional & Corporate Headquarters			50	50

				Exterior Noise Exposure (dBA CNEL)			
				60	65	70	75
Land Use Category							
Vehicle and Vehicular Equipment Sales and Services Use							
Commercial or Personal Vehicle Repair & Maintenance; Commercial or Personal Vehicle Sales & Rentals; Vehicle Equipment & Supplies Sales & Rentals; Vehicle Parking							
Wholesale, Distribution, Storage Use Category							
Equipment & Materials Storage Yards; Moving & Storage Facilities; Warehouse; Wholesale Distribution							
Industrial							
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking & Transportation Terminals; Mining & Extractive Industries							
Research & Development						50	
	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level.				
		Outdoor Uses	Activities associated with the land use may be carried out.				
45, 50	Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number (45 or 50) for occupied areas.				
		Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable.				
	Incompatible	Indoor Uses	New construction should not be undertaken.				
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.				

Source: TABLE NE-3, City of San Diego General Plan, Noise Element.

City of San Diego Municipal Code 59.5.0401 (Noise Ordinance)

The Noise Ordinance sets operational noise level limits and makes it unlawful for any person to cause noise by any means to the extent that the 1-hour L_{eq} exceeds the applicable limit given in Table 4.10-10 at any location in the City of San Diego on or beyond the boundaries of the property on which the noise is produced.

Table 4.10-10. City of San Diego Noise Limits

Land Use	Time of Day	1-Hour L_{eq} (dBA)
Single Family Residential	7 a.m. to 7 p.m.	50
	7 p.m. to 10 p.m.	45
	10 p.m. to 7 a.m.	40
Multi-Family Residential (up to a maximum density of 1/2,000)	7 a.m. to 7 p.m.	55
	7 p.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
All other Residential	7 a.m. to 7 p.m.	60
	7 p.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial	7 a.m. to 7 p.m.	65
	7 p.m. to 7 a.m.	60
Industrial or Agricultural	Any time	75

Source: City of San Diego Municipal Code.

Note: The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts.

City of San Diego Municipal Code 59.5.0404 (Construction Noise)

The City of San Diego's Noise Ordinance also regulates construction noise levels. Specifically, construction that creates disturbing, excessive, or offensive noise is prohibited between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, and on legal holidays as specified in Section 21.04 of the City of San Diego Municipal Code, with the exception of Columbus Day and Washington's Birthday, and on Sundays unless a permit is granted by the Noise Abatement and Control Administrator.

In granting a permit, the Administrator must consider whether the construction noise in the vicinity of the proposed work site would be less objectionable at night than during the daytime because of different population densities or different neighboring activities; whether obstruction and interference with traffic particularly on streets of major importance, would be less objectionable at night than during the daytime; whether the type of work to be performed emits noises at such a low level as to not cause significant disturbances in the vicinity of the work site; the character and nature of the neighborhood of the proposed work site; whether great economic hardship would occur if the work were spread over a longer time; and whether proposed night work is in the general public interest. Also, the Administrator shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise levels as deemed to be required in the public interest.

Except under special circumstances related to emergency work as detailed in the Noise Ordinance, construction activity that creates an average sound level greater than 75 dB during the 12-hour period from 7:00 a.m. to 7:00 p.m. at or beyond the property lines of any property zoned residential is prohibited by ordinance.

City of Imperial Beach

City of Imperial Beach General Plan

The City of Imperial Beach General Plan, Noise Element, provides information, goals, and policies related to the noise environment within Imperial Beach. The Noise Element describes the noise sensitivity of various land uses in terms of how acceptable different noise exposures are for various land uses, defined using L_{dn} or CNEL. There are three different tiers of compatibility: (1) Acceptable, (2) Conditionally Acceptable, and (3) Unacceptable. The guidelines are illustrated in Figure N-3 of the General Plan, which is reproduced below as Table 4.10-11.

Table 4.10-11. City of Imperial Beach Land Use Compatibility Guidelines for Development

Land Use	Community Noise Exposure L _{dn} or CNEL					
	55	60	65	70	75	80
Residential, Theaters, Auditoriums, Music Halls, Meeting Halls, Churches	Acceptable		Conditionally Acceptable		Unacceptable	
	Specified land use is satisfactory. No noise mitigation measures are required.		Use should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.		Development is usually not feasible in accordance with the goals of the Noise Element.	
Transient Lodging – Motels, Hotels	Acceptable		Conditionally Acceptable		Unacceptable	
	Specified land use is satisfactory. No noise mitigation measures are required.		Use should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.		Development is usually not feasible in accordance with the goals of the Noise Element.	
Schools, Libraries, Museums, Hospitals, Nursing Homes	Acceptable		Conditionally Acceptable		Unacceptable	
	Specified land use is satisfactory. No noise mitigation measures are required.		Use should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.		Development is usually not feasible in accordance with the goals of the Noise Element.	
Playgrounds, Parks	Acceptable		Conditionally Acceptable		Unacceptable	
	Specified land use is satisfactory. No noise mitigation measures are required.		Use should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.		Development is usually not feasible in accordance with the goals of the Noise Element.	
Commercial and Office Buildings	Acceptable		Conditionally Acceptable		Unacceptable	
	Specified land use is satisfactory. No noise mitigation measures are required.		Use should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.		Development is usually not feasible in accordance with the goals of the Noise Element.	
	Acceptable	Specified land use is satisfactory. No noise mitigation measures are required.				
	Conditionally Acceptable	Use should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.				
	Unacceptable	Development is usually not feasible in accordance with the goals of the Noise Element.				

Source: City of Imperial Beach General Plan, Noise Element, Figure N-3 (p. N-4), 2015.

City of Imperial Beach Municipal Code – Operational Noise

Chapter 9.32 of the City of Imperial Beach Municipal Code regulates noise. Operational noise is addressed qualitatively and the code makes it “unlawful for any person, firm, association, or corporation to disturb the peace, quiet and comfort of the community or any portion thereof or neighborhood therein by creating or causing to be created any unreasonably loud or disturbing unnecessary noises in the city.”

City of Imperial Beach Municipal Code – Construction Noise

Regarding construction noise Section 9.32.020(H) of the City of Imperial Beach Municipal Code prohibits “The use of any tools, power machinery or equipment so as to cause noises disturbing to the comfort and repose of any person residing or working in the vicinity, or in excess of seventy-five decibels, between the hours of ten p.m. and seven a.m., except when the same is necessary for emergency repairs.”

City of Coronado

City of Coronado General Plan

The City of Coronado General Plan, Noise Element, provides information, goals, and policies related to the noise environment within Coronado. The Noise Element describes the noise sensitivity of

various land uses in terms of how acceptable different noise exposures are for various land uses, defined using the CNEL. There are four different tiers of compatibility: (1) Clearly Acceptable, (2) Normally Acceptable, (3) Normally Unacceptable, and (4) Clearly Unacceptable. The guidelines are illustrated in Figure 2 of the General Plan, which is reproduced, below, as Table 4.10-12.

Table 4.10-12 City of Coronado Noise Sensitivity of Land Use

Land Use	CNEL Value					
	45	55	65	75	85	95
Mobile Homes			■	■	■	■
Single Family, Townhouses, Apartments			■	■	■	■
High Rise Residence			■	■	■	■
Hotels, Motels			■	■	■	■
Schools, Churches, Libraries		■	■	■	■	■
Auditoriums, Concert Halls		■	■	■	■	■
Parks, Playgrounds			■	■	■	■
Golf Courses, Riding Stables			■	■	■	■
Offices			■	■	■	■
Commercial-Retail, Movie Theaters, Restaurants			■	■	■	■
Commercial-Wholesale, Some Retail, Manufacturing			■	■	■	■
Livestock Farming			■	■	■	■
Other Farming					■	■
	Clearly Acceptable					
■	Normally Acceptable					
■	Normally Unacceptable					
■	Clearly Unacceptable					

Source: City of Coronado General Plan, Noise Element, Figure 2 (p. II-L5).

City of Coronado Municipal Code – Operational Noise

Title 41 of the City of Coronado Municipal Code provides the Noise Abatement and Control Regulations. Section 41.10.010 makes it unlawful for any person to cause noise by any means to the extent that the 1-hour L_{eq} exceeds the applicable limit given in Table 4.10-13 below, at any location in the City of Coronado on or beyond the boundaries of the property on which the noise is produced.

Table 4.10-13. City of Coronado Noise Limits

Land Use Zone	Time of Day	1-Hour L_{eq} (dBA)
All R-1A; R-1B (Single-Family Residential)	7 a.m. to 7 p.m.	50
	7 p.m. to 10 p.m.	45
	10 p.m. to 7 a.m.	40
All R-3; R-4; R-PCD; and R-5 (Multi-Family Residential and Planned Community Development Residential)	7 a.m. to 7 p.m.	55
	7 p.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45

Land Use Zone	Time of Day	1-Hour L_{eq} (dBA)
Commercial (C); Commercial Recreation (C-R); Hotel/Motel (HM); Civic Use (C-U); Open Space (OS); and Parking Overlay (P-1)	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	60 50

Source: City of Coronado Municipal Code, Chapter 41.10.

Note: The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts.

City of Coronado Municipal Code – Construction Noise

The City of Coronado Municipal Code regulates both the permissible times of construction activities and the noise levels these activities can generate. Section 41.10.040 provides a construction noise curfew, which prohibits construction between the hours of 7:00 p.m. and 7:00 a.m. on any day or on legal holidays and Sundays (unless a noise control permit has been applied for and granted beforehand by the Noise Control Officer). Section 41.10.050 provides construction noise limits, making it unlawful for any person to conduct any construction activity so as to cause, at or within the property lines of any property zoned residential, an average sound level greater than 75 dBA during a 1-hour period, any time between the hours of 7:00 a.m. to 7:00 p.m. (unless a variance has been applied for and granted by the Noise Control Officer).

San Diego International Airport Land Use Compatibility Plan

Noise compatibility standards for aircraft operations are provided in Table 2-1 of the ALUCP for SDIA (Airport Land Use Commission, San Diego County Regional Airport Authority 2014). The noise compatibility standards address a broad range of land uses including residential, commercial, educational, institutional, public services, industrial, transportation, communication, utilities, recreation, parks, open space, and agriculture.

Naval Air Station North Island Airport Land Use Compatibility Plan

Noise compatibility standards for aircraft operations are provided in Table 4 of the ALUCP for NAS North Island (Airport Land Use Commission, San Diego County Regional Airport Authority 2020). The noise compatibility standards address a broad range of land uses including residences and lodging, manufacturing, transportation, communication, utilities, trade, services, culture, entertainment, recreation, and resource production and extraction.

4.10.6 Project Impact Analysis

4.10.6.1 Methodology

The following impact analysis evaluates the potential effects on noise and vibration conditions that could occur from future development consistent with the proposed PMPU. The methodology considers the existing noise and vibration conditions established under Section 4.10.4, *Existing Conditions*, and the thresholds of significance established under Section 4.10.6.2, *Thresholds of Significance*, to determine the proposed PMPU's potential to result in one or more impacts relative to existing noise and vibration conditions.

To avoid redundancy in the analysis and present a concise discussion, the analysis discusses the planning districts collectively, as appropriate. When a planning district has unique or special existing conditions and/or may result in one or more unique significant impacts with mitigation specific to that planning district, the analysis presents a separate discussion of that planning district.

Where feasible, potential impacts have been quantified based on general development descriptions provided in the proposed PMPU. In such cases, noise and vibration levels from construction or operations have been estimated based on existing data for similar projects. In general, those analyses use conservative assumptions to encompass a broad range of project possibilities.

A summary of the methodology is provided below. For potential future actions under the proposed PMPU that cannot be usefully quantified, a qualitative discussion is provided.

General Assumptions for Noise Calculations

Three of the most important variables affecting the noise level experienced at a noise-sensitive receptor are (1) the distance between the noise source and the receptor, (2) the ground conditions between the two, and (3) the acoustical shielding between the two. These are summarized below.

Source-to-Receiver Distances

Depending on the source in question and the noise metric to be assessed, one of two definitions can be used to describe the source-to-receiver distance, as summarized below.

Closest Distance. The closest source-to-receptor distance is very straightforward and describes the shortest distance between the noise-sensitive receptor and the closest part of the noise source, such as an individual piece of equipment or the closest edge of an active construction site.

Acoustical Average Distance. The acoustical average distance is used to represent noise sources that are mobile or distributed over an area (such as a construction site, sports field, or parking lot); it is calculated by multiplying the shortest distance between the receiver and the noise source area by the farthest distance and then taking the square root of the product:

$$\text{Acoustical average distance} = \sqrt{\text{Distance}_A \times \text{Distance}_B}$$

where Distance_A is the shortest distance between the receiver and the noise source area (i.e., the active construction site) and Distance_B is the longest distance between the receiver and the noise source area.

For a small stationary noise source, such as an individual piece of mechanical equipment, there is usually negligible difference between the closest distance and the acoustical average distance. However, the acoustical average distance is generally a more accurate description for larger distributed noise sources; in such cases, the acoustical average distance is always larger than the closest distance.

Ground Conditions

Noise levels were conservatively assumed to decrease at a rate of 6 dB per doubling of distance, which is the standard assumption for acoustically hard (i.e., reflective) ground surfaces such as asphalt, concrete, water, and packed dirt. In reality, the attenuation rate may be higher due to the presence of acoustically soft ground conditions (i.e., unpaved areas with ground cover such as packed dirt, soft dirt, turf, grass, or other vegetation).

Acoustical Shielding

Another conservative assumption in the modeling was to neglect barrier effects (acoustical shielding) that might be provided by walls, fences, buildings, topography, and other solid barriers.

Construction Noise

Construction-related noise was analyzed using data and modeling methodologies from FHWA's Roadway Construction Noise Model (RCNM) Version 1.1 (FHWA 2008), which predicts average noise levels at nearby receptors by analyzing the type of equipment, the distance from source to receptor, usage factor, and the presence or absence of intervening shielding between source and receptor. Although the proposed PMPU is not specifically a roadway construction project, the model is broad enough to be applicable, providing noise data for all equipment types typically required during conventional construction.

In order to facilitate quantitative construction noise analysis, it was necessary to make assumptions about the type of construction activity that might occur that would be associated with development consistent with the proposed PMPU. The most intensive future construction activities would be demolition, foundations, framing, and in-water pile driving. Therefore, representative construction scenarios have been assumed based on previous analyses for development within the District. Equipment schedules for the following construction scenarios were used.

1. **Typical mobilization/demolition.** Mobilization and demolition not requiring the loudest equipment associated with demolishing concrete structures (concrete saws and mounted impact hammers).
2. **Major mobilization/demolition.** Mobilization and demolition requiring the loudest equipment associated with demolishing concrete structures.
3. **Building foundations without pile driving.** Construction of building foundations that do not require pile driving, or during days when pile drivers are not used.
4. **Building foundations with one pile driver.** Construction of building foundations using a single pile driver.
5. **Building foundations with two pile drivers.** Construction of building foundations using two pile driving rigs simultaneously.
6. **Structural framing.** Construction of building framing.
7. **Marina construction without pile driving.** Construction of waterside elements that do not require pile driving, or during days when pile drivers are not used.
8. **Marina construction with pile driving.** Construction of waterside elements requiring pile driving.

These examples provide a range of realistic possibilities for waterside and landside construction, including typical worst-case (i.e., loudest) scenarios with pile driving. The equipment schedule for each construction activity is summarized in Table 4.10-14.

Table 4.10-14. Representative Construction Scenarios

Construction Phase/ Activity		Equipment (Number of Pieces)
1	Typical mobilization/ demolition	AC cold planer (1), loader (1), dump truck (2), backhoe loader (1), water truck (1)
2	Major mobilization/ demolition	Concrete saw (1), mounted impact hammer (1), loader (1), dump truck (2), backhoe loader (1), water truck (1)
3	Building foundations without pile driving	Grader (1), excavator (2), loader (2), dump truck (2), backhoe loader (2), water truck (1)
4	Building foundations with one pile driver	Grader (1), excavator (2), loader (2), dump truck (2), backhoe loader (2), water truck (1), pile driving rig (1)
5	Building foundations with two pile drivers	Grader (1), excavator (2), loader (2), dump truck (2), backhoe loader (2), water truck (1), pile driving rig (2)
6	Structural framing	Crane (2), concrete pump (2), all terrain forklifts (2), backhoe loader (1), water truck (1)
7	Marina construction without pile driving	Forklift (1), portable crane (1), derrick barge (1), push boat (1), skiffs (2)
8	Marina construction with pile driving	Forklift (1), portable crane (1), derrick barge (1), push boat (1), skiffs (2), pile driver (1), jet pump (1)

Because construction noise is assessed against L_{eq} noise limits of varying durations (1-hour, 8-hour, or 12-hour), depending on the city in which the construction takes place, both the duration of construction and the combination of construction equipment operating simultaneously are important. To provide a conservative analysis for each phase, the noise level was calculated as a 1-hour L_{eq} assuming all equipment for that phase would operate during the hour. (This is considered to be conservative because it does not consider equipment downtime that would occur over a longer 8- or 12-hour calculation period.) Using this methodology, potential impact distances were calculated for the various construction phases that could be necessary at future projects. These results can be used in the future as screening distances beyond which the various construction activities would not generate significant impacts.

Operation

Traffic

The analysis was conducted using a proprietary traffic noise model, with calculations based on data from the FHWA Traffic Noise Model, Version 2.5, Look-Up Tables (FHWA 2004). The inputs used in the traffic noise modeling included the average daily traffic (ADT) data; assumed traffic mix and daily distribution data (i.e., the percentage of automobiles versus medium trucks and heavy trucks during each hour of the day); and traffic speeds, based on the posted speed limits. The ADT data was provided by Chen Ryan Associates (the traffic engineer for the proposed PMPU). The data was provided for two scenarios: (1) existing conditions and (2) horizon year with PMPU development. The noise modeling (including the model inputs and outputs) is provided in Appendix H.

Onsite Operation

At a programmatic level, the proposed PMPU plans for a wide assortment of possible future development. Examples of allowable development are provided in Chapter 3, *Project Description*,

and future development (i.e. planned improvements) is discussed under Section 3.5.3 and within Table 3-4. Moreover, as indicated in Chapter 3, development consistent with the proposed PMPU's goals, objectives, and policies, including the Water and Land Use Element, as well as the development standards of the individual planning districts, could be proposed in the future during the life of the proposed PMPU even if it is not included in Table 3-4. Noise from onsite operations is mostly discussed qualitatively. Quantitative assessments are provided where adequate data is available.

Vibration

Construction-related vibration was analyzed using data and modeling methodologies provided by Caltrans' *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020). This guidance manual provides typical vibration source levels for various types of construction equipment, as well as methods for estimating the propagation of groundborne vibration over distance. Because potential vibration impacts are assessed based on peak levels, rather than long-term average levels, the source-to-receptor distances used in the analyses were the closest distances between the relevant construction activity and each receptor. Table 4.10-15 provides the reference PPV for various types of construction equipment expected to be used over the course of the proposed PMPU. The levels are provided for a reference distance of 25 feet.

Table 4.10-15. Construction Equipment Reference Vibration Levels

Equipment Item	Reference PPV at 25 feet, in/s ¹
Pile driver (impact or vibratory)	0.650
Hydraulic breaker ²	0.240
Vibratory roller	0.210
Large bulldozer ³	0.089
Drilling ⁴	0.089
Jackhammer	0.035
Small bulldozer ⁵	0.003

¹ Obtained from Caltrans 2020.

² Also commonly referred to as a hoe ram.

³ Considered representative of other heavy earthmoving equipment such as excavators, graders, and backhoes.

⁴ Based on caisson drilling.

⁵ Considered representative of other smaller earthmoving equipment such as a Bobcat® or skid steer.

The following equation from the guidance manual was used to estimate the change in PPV levels over distance.

$$PPV_{rec} = PPV_{ref} \times (25/D)^n$$

where PPV_{rec} is the PPV at a receptor, PPV_{ref} is the reference PPV at 25 feet from the equipment, D is the distance from the equipment to the receiver in feet, and n is a value related to the vibration attenuation rate through ground (the default recommended value for n is 1.1).

Using this methodology, potential impact distances were calculated for the various types of vibration-generating construction equipment that could be used at future projects. Impact distances were calculated relative to thresholds for both potential building damage and for potential human

annoyance. These results can be used in the future as screening distances beyond which the various construction activities would not generate significant impacts.

Supplemental Noise Guidelines

The City of San Diego's California Environmental Quality Act (CEQA) Significance Determination Thresholds outline the criteria and thresholds used by the city to determine whether project impacts are significant (City of San Diego 2016). The thresholds for traffic-generated noise, which are reproduced below as Table 4.10-16, are used in this PEIR for assessing traffic noise impacts within the city (see Section 4.10.6.2, *Thresholds of Significance*).

Table 4.10-16. City of San Diego Traffic Noise Significance Thresholds

Structure or Proposed Use that Would Be Impacted by Traffic Noise	Interior Space (CNEL)	Exterior Usable Space¹ (CNEL)	General Indication of Potential Significance
Single-Family Detached	45 dB	65 dB	Structure or outdoor usable area ² is <50 feet from the center of the closest (outside) lane on a street with existing or future ADT >7,500
Multi-Family, Schools, Libraries, Hospitals, Day Care, Hotels, Motels, Parks, Convalescent Homes	Development Services Department ensures 45 dB pursuant to Title 24	65 dB	
Offices, Churches, Business, Professional Uses	N/A	70 dB	Structure or outdoor usable area is <50 feet from the center of the closest lane on a street with existing or future ADT of >20,000
Commercial, Retail, Industrial, Outdoor Spectator Sports Uses	N/A	75 dB	Structure or outdoor usable area is <50 feet from the center of the closest lane on a street with existing or future ADT of >40,000

Source: City of San Diego, CEQA Significance Determination Thresholds, Table K-2, p. 51, 2016.

¹ If a project is currently at or exceeds the significance thresholds for traffic noise described above, and noise levels would result in less than a 3 dB increase, then the impact is not considered significant.

² Exterior usable areas do not include residential front yards or balconies, unless the areas such as balconies are part of the required usable open space calculation for multi-family units.

ADT = average daily traffic.

4.10.6.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines (2018) and the various laws, regulations, and guidelines discussed in Section 4.10.5, *Laws, Regulations, Plans, and Policies*, and provide the basis for determining significance of impacts from noise and vibration associated with the implementation of the proposed PMPU. The determination of whether a noise impact would be significant is based on the thresholds described below, the professional judgment of the District as Lead Agency, and the recommendations of qualified personnel at ICF and are supported by substantial evidence in the record.

The District has not adopted its own specific thresholds of impact for potential noise and vibration impacts and, therefore, uses, where appropriate, the standards and guidelines of other agencies, such as its member cities or Caltrans. Significance criteria for each issue area may be subdivided to address distinct noise sources (e.g., construction, onsite operations, traffic). All thresholds would apply at the location of the affected sensitive receptor and not at the project site boundaries unless the boundary is shared with the sensitive receptor.

The development of these criteria does not imply that quantitative analyses are necessary in all cases for all future projects that tier from this PEIR. Depending on the specific characteristics of the project under consideration, it may be obvious that there would be no significant impacts related to noise/vibration issue areas. In such cases, a qualitative discussion, backed by substantial evidence, would be sufficient.

Impacts are considered significant if the proposed PMPU would result in any of the following.

1. The project would result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

For construction activity:

- a. Construction activity fails to comply with the construction noise standards of the applicable member city, typically provided by the municipal code, in which the project is to be constructed. In the event that the applicable city does not have quantitative construction noise limits, the applicable noise standard shall be an 8-hour L_{eq} of 75 dBA between 7 a.m. and 7 p.m.

For onsite (stationary) noise sources:

- a. Noise from onsite operational activity exceeds the exterior noise standards of the applicable member city, typically provided by the municipal code, in which the project is proposed. For the City of Imperial Beach, which does not have any quantitative standards, the standards of the County of San Diego shall be applied; or
- b. Noise from onsite operational activity increases ambient noise levels by 5 dBA or more (a readily perceptible change) if the resulting combined noise level is less than or equal to the applicable municipal code standard; or
- c. Noise from onsite operational activity increases ambient noise levels by 3 dBA or more (a barely perceptible change) if the resulting combined noise level is greater than the applicable municipal code standard.

For traffic noise:

- a. Based on existing-plus-project conditions, the project increases existing traffic noise levels by 3 dB CNEL or more to a level that is above the local standards or guidelines of the applicable member city, or any traffic noise increase of 5 dB CNEL or more. For the City of San Diego, the applicable standards are contained in the City of San Diego's CEQA Significance Determination Thresholds. For all other cities, the applicable standard/guideline shall be taken from the noise-land use compatibility matrix of the noise element of their general plan; noise levels classified as "Compatible," "Conditionally Compatible," "Acceptable," "Clearly Acceptable," "Normally Acceptable," "Conditionally

Acceptable,” or similar shall be considered to comply with applicable standards for the purposes of analyzing traffic noise impacts.

2. The project would result in generation of excessive groundborne vibration or groundborne noise levels.

For construction activity:

- a. Groundborne vibration exceeds Caltrans’ guideline vibration criteria for damage to structures at any nearby buildings or annoyance to people (distinctly perceptible vibration) at any vibration-sensitive location, based on the most recent Caltrans’ *Transportation and Construction Vibration Guidance Manual* (2020 or newer).

For onsite operational sources of vibration:

- b. Groundborne vibration exceeds 0.01 in/s over the range of 1 to 100 Hz at or beyond the property boundary of the source.
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, the project would expose people residing or working in the project area to excessive noise levels.
 - a. The project exacerbates existing aircraft-related noise conditions at noise-sensitive receptors such that exposure to aircraft noise levels in excess of the standards of the applicable ALUCP/AICUZ would result or, where no applicable ALUCP/AICUZ exists, the standards of the general plan for the city in which the project is to be constructed. “Exacerbates” shall be interpreted as an increase of 5.0 dB or more where ambient noise levels are less than 60 dB, 3.0 dB or more where ambient noise levels are 60–65 dB, or 1.5 dB or more where ambient noise levels are greater than 65 dB (L_{dn} or CNEL).

4.10.6.3 Policies that May Avoid or Reduce Impacts

There are no policies of the proposed PMPU Elements that directly address noise or vibration. Therefore, no specific potential noise or vibration impacts would be reduced or avoided because of the proposed PMPU policies.

Chapter 6, *Plan Implementation and Development Conformance*, of the Port Master Plan (PMP) requires that all development under the PMP conforms with various requirements to be consistent with the PMP. While these requirements are not strictly PMP policies, they nonetheless include actions that would avoid and reduce impacts related to aircraft noise. Specifically, Section 6.2.3, *Regional Water and Land Use Compatibility*, of the PMP discusses how the District will achieve consistency with the applicable ALUCPs, including noise/land use compatibility:

“Upon completion of the following actions, the ALUCPs will be implemented and the District will be responsible for the consistency review of discretionary and ministerial projects located within the AIAs listed above.

1. The District shall coordinate with the ALUC to ensure consistency with the ALUCPs as follows:
 - a. In the preparation of future amendments or updates to the ALUCPs to ensure the compatibility of District water and land uses with airport operations; and

- b. For submission of all future PMPAs to the ALUC for a determination of consistency with the adopted ALUCPs. This should typically occur prior to any BPC or CCC approval of a subject PMPA.
2. After a PMPA has been determined by the ALUC to be consistent with applicable ALUCPs, the District shall:
 - a. Coordinate with the ALUC to implement the ALUCPs as required under California Government Code §65302.3(a), (b) and (c). Legislative actions (Port Master Plan amendments) will continue to be forwarded to the ALUC for consistency review; and
 - b. Use the applicable ALUCP as guidance/reference during consistency review of discretionary and ministerial developments on Tidelands that are within an AIA. For ALUCPs that have not been implemented, the District shall continue to submit all developments that are within an AIA to the ALUC for review (refer to *SR Policies 1.1.7 through 1.1.9 [Chapter 3.4, Safety and Resiliency Element]* regarding guidance for safe development in the AIA)."

4.10.6.4 Project Impacts and Mitigation Measures

Impacts associated with the proposed PMPU are discussed below. Each topic analyzed is divided into specific issues, based on potential impacts, and addresses construction- and operation-related impacts separately wherever relevant. The discussion of potential impacts is based on the applicable threshold of significance (see below) for each issue.

An analysis of each of the possible three project options is also provided following the proposed PMPU analysis—consistent with applicable thresholds and at the same level of review as the PMPU. For reference, the details of each option are described in Chapter 3.

Threshold 1: Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the proposed PMPU in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact Analysis

Impacts of Water and Land Uses

Construction

The potential for significant construction noise impacts would depend on the combination of construction equipment used, the proximity of the work to sensitive receptors, and the time of day at which the work occurs. The exact thresholds of impact vary depending on the city in which the construction activity is located and are summarized in Table 4.10-17.

Table 4.10-17. Summary of Construction Noise Thresholds by City

City	Municipal Code Section	Construction Hours Prohibited	Construction Noise Level Limits
Coronado	41.10	7:00 p.m. – 7:00 a.m. Monday through Saturday; Sundays; legal holidays	75 dBA $L_{eq(h)}$ (1-hour average)
Imperial Beach	9.32	10:00 p.m. – 7:00 a.m.	75 dBA $L_{eq(8)}$ (8-hour average) ¹
San Diego	59.5	7:00 p.m. – 7:00 a.m. Monday through Saturday; Sundays; certain legal holidays	75 dBA $L_{eq(12)}$ at residential properties (12-hour average)

¹ Duration of noise is not specified in the City of Imperial Beach Municipal Code; 8-hour average is assumed for consistency with the County of San Diego Municipal Code.

The timing, location, and duration of construction activities associated with future development allowed under the proposed PMPU, are not known at this time. However, using the methodology described in Section 4.10.6.1, the impact distances, within which construction noise would potentially exceed 75 dBA L_{eq} , were calculated for the range of representative construction scenarios. The analyses are provided in Appendix H, and the results are summarized in Tables 4.10-18 and 4.10-19. Table 4.10-18 is provided for comparison purposes and illustrates the relative noise level for each scenario at a reference distance of 50 feet. Table 4.10-19 shows the calculated distance from each phase of construction at which the noise level would be reduced to 75 dBA L_{eq} . These can be considered screening distances for the range of construction activities anticipated to occur under the proposed PMPU. The appropriate screening distance for construction scenarios or phases not specifically described in Table 4.10-19 can be determined based on the equipment lists provided in Table 4.10-14, with particular attention paid to any inclusion of high-noise equipment, such as concrete saws, impact hammers, or pile drivers. Similar construction activities conducted in the future would not be expected to cause significant impacts at noise-sensitive receptors beyond the relevant distances from a project site. In general, these distances may be considered conservative because they do not consider the potential noise reduction that may occur because of the presence of acoustically soft ground cover or barrier effects provided by intervening buildings, walls, fences, or topography. For the simplest and most conservative screening approach the distances may be considered the closest allowable distances between the active construction zone and a given receiver. However, if the equipment is expected to be mobile across a work area, then these distances will more accurately correspond to acoustical average distances.

Table 4.10-18. Construction Noise Levels from Representative Construction Scenarios

Construction Scenario	L_{eq} at Reference Distance of 50 feet, dBA (1-hour, 8-hour, or 12-hour average)
1 Typical mobilization/demolition	82.3
2 Major mobilization/demolition	87.5
3 Building foundations without pile driving	85.9
4 Building foundations with one pile driver	94.9
5 Building foundations with two pile drivers	97.6
6 Structural framing	82.5

Construction Scenario	L_{eq} at Reference Distance of 50 feet, dBA (1-hour, 8-hour, or 12-hour average)
7 Marina construction without pile driving	84.6
8 Marina construction with pile driving	94.8

Table 4.10-19. Distances Required to Reduce Construction Noise Levels to 75 dBA L_{eq}

Construction Scenario	Distance from Construction Activity Required to Reduce Noise Levels to 75 dBA L_{eq} or Less (feet)¹
1 Typical mobilization/demolition	115
2 Major mobilization/demolition	215
3 Building foundations without pile driving	175
4 Building foundations with one pile driver	495
5 Building foundations with two pile drivers	680
6 Structural framing	120
7 Marina construction without pile driving	155
8 Marina construction with pile driving	495

¹ For screening purposes these distances may conservatively be considered the closest allowable distances between the active construction zone and a given receiver. However, if the equipment operating on any given day is expected to be mobile across a work area, then these distances may be considered acoustical average distances.

The largest impact distances are all associated with construction scenarios that include pile driving (i.e., scenarios 4, 5, and 8), with the worst-case scenario (scenario 5) utilizing two pile drivers simultaneously. Without pile driving, impacts are limited to distances of 215 feet or less. The proposed PMPU considers a wide range of future development potential, from adding pedestrian and bike paths and resurfacing piers, to creating mobility hubs of varying sizes, improving and reconfiguring roadways, and installing large-scale commercial developments (including hotels, retail, restaurants, and meeting space). Because the exact construction details and locations of future development are unknown, project-level impacts cannot be quantified. However, noise-sensitive water and land uses are located throughout and adjacent to all of the planning districts and could be located within the applicable impact distances of future construction. As a result, it is possible that construction noise generated under the proposed PMPU will exceed the threshold of 75 dBA L_{eq} at parks (**Impact-NOI-1**) or other noise-sensitive receptors (**Impact-NOI-2**) in any of the planning districts, or within 680 feet of a planning district boundary. In addition, the possibility of construction activity during prohibited days and hours cannot be ruled out. Noise from any such activity that is not reduced to comply with applicable evening and nighttime standards for stationary noise sources (refer to Tables 4.10-8, 4.10-10, and 4.10-13) would also cause a significant construction noise impact (**Impact-NOI-3**). As a result, the impact is significant prior to mitigation.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses.

Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction noise impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the PMPU, including within PD3, would result in significant construction noise impacts (**Impact-NOI-1, Impact-NOI-2, and Impact-NOI-3**). These significant impacts would still occur within PD3 under Option 1 because of the same future development that could still occur outside of the Option 1 boundary within PD3.

The types of construction that would occur for Option 1 would fall within the range of scenarios analyzed above. Assuming Option 1 would not include substantial buildings or waterside improvements that would require pile driving, noise impacts could occur at sensitive receptors located within approximately 215 feet of the construction area. The impact distance would increase to 495 to 680 feet if pile driving is required. Depending on the final construction methods and project footprint, sensitive receptors within these distances that could experience construction noise levels in excess of 75 dBA L_{eq} could include parks such as Tuna Harbor Park or the County Administration Center (CAC) Waterfront Park (**Impact-NOI-1**) and also existing residences (condominiums) on Pacific Highway (**Impact-NOI-2**). In addition, the possibility of construction activity during prohibited days and hours cannot be ruled out. Noise from any such activity that is not reduced to comply with applicable evening and nighttime standards for stationary noise sources (refer to Tables 4.10-8, 4.10-10, and 4.10-13) would also cause a significant construction noise impact (**Impact-NOI-3**). However, these would not be additional or more severe impacts than buildout of the PMPU, without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the PMPU, including within PD3, would result in significant construction noise impacts (**Impact-NOI-1, Impact-NOI-2, and Impact-NOI-3**). These significant impacts would still occur within PD3 under Option 2, as a result of the same future development that could still occur outside of the Option 2 boundary, within PD3.

The types of construction that would occur for Option 2 would fall within the range of scenarios analyzed above. Assuming Option 2 would not include substantial buildings or waterside improvements that would require pile driving, noise impacts could only at sensitive receptors located within approximately 215 feet of the construction area. The impact distance would increase to 495 to 680 feet if pile driving is required. Depending on the final methods of construction, sensitive receptors within these distances that could experience construction noise levels in excess of 75 dBA L_{eq} could include parks such as the CAC Waterfront Park or Lane Field Park (**Impact-NOI-1**) and also existing residences (condominiums) on Pacific Highway (**Impact-NOI-2**). In addition, the possibility of construction activity during prohibited days and hours cannot be ruled out. Noise from any such activity that is not reduced to comply with applicable evening and nighttime standards for stationary noise sources (refer to Tables 4.10-8, 4.10-10, and 4.10-13) would also cause a significant construction noise impact (**Impact-NOI-3**). However, these would not be additional or more severe impacts than buildout of the PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the PMPU, including within PD3, would result in significant construction noise impacts (**Impact-NOI-1**, **Impact-NOI-2**, and **Impact-NOI-3**). These significant impacts would still occur within PD3 under Option 3, as a result of the same future development that could still occur outside of the Option 3 boundary within PD3.

The types of construction that would occur for Option 3 would fall within the range of scenarios analyzed above. Assuming Option 3 would not include substantial buildings or waterside improvements that would require pile driving, noise impacts could occur at sensitive receptors located within approximately 215 feet of the construction area. The impact distance would increase to 495 to 680 feet if pile driving is required. Depending on the final construction methods and project footprint, sensitive receptors within these distances that could experience construction noise levels in excess of 75 dBA L_{eq} could include parks, such as the CAC Waterfront Park or Lane Field Park (**Impact-NOI-1**) and also existing residences (condominiums) on Pacific Highway (**Impact-NOI-2**). Depending on the phasing of construction, some noise impacts at parks may be eliminated by the closure of those parks as part of Option 3 (for instance closing parts of CAC Waterfront Park to make way for the realigned Harbor Drive). In addition, the possibility of construction activity during prohibited days and hours cannot be ruled out. Noise from any such activity that is not reduced to comply with applicable evening and nighttime standards for stationary noise sources (refer to Tables 4.10-8, 4.10-10, and 4.10-13) would also cause a significant construction noise impact (**Impact-NOI-3**). However, these would not be additional or more severe impacts than buildout of the proposed PMPU without Option 3.

Traffic

Traffic noise levels were estimated along each of the 47 roadway segments analyzed by the traffic study. The traffic noise analysis is provided in Appendix H, and the results are summarized in Table 4.10-20. The table shows the existing traffic noise levels, the future (2050) noise levels, and the resulting increase. Referring to the summarized results, noise levels at 50 feet from the centerline of the studied roadways range from approximately 52–77 dB CNEL under existing conditions and from approximately 53–75 dB CNEL under 2050 conditions. The changes in traffic noise adjacent to any individual roadway range from approximately -3 to +6 dB. The future traffic noise impacts are in the list below are anticipated with implementation of the proposed PMPU and are considered significant (**Impact-NOI-4**). The roadway segments with predicted noise impacts are highlighted in Table 4.10-20. All the identified impacts occur within the City of San Diego. The affected noise-sensitive land uses consist of hotels/motels, parks, and condominiums. Based on the City of San Diego traffic noise significance thresholds, the exterior traffic noise threshold for all of these uses is 65 dB CNEL.

- Harbor Island Drive between North Harbor Drive and Harbor Island Drive southern terminus, due to a noise increase of 3 dB or more (4.6 dB) at a hotel, with a resulting noise level in excess of 65 dB CNEL (69.4 dB CNEL).
- Harbor Island Drive from the western terminus, due to a noise increase of 3 dB or more (5.5 dB) at hotels and Harbor Island Park, with a resulting noise level in excess of 65 dB CNEL (67.2 dB CNEL).

- Pacific Highway between West Laurel Street and West Hawthorn Street, due to a noise increase of 3 dB or more (5.0 dB) at hotels/motels, with a resulting noise level in excess of 65 dB CNEL(69.9 dB CNEL).
- Pacific Highway between West Ash Street and West Broadway, due to a noise increase of 3 dB or more (3.1 dB) at condominiums and hotels, with a resulting noise level in excess of 65 dB CNEL (68.9 dB CNEL).
- West Ash Street between North Harbor Drive and Pacific Highway, due to a noise increase of 3 dB or more (3.2 dB) at a hotel and CAC Waterfront Park, with a resulting noise level in excess of 65 dB CNEL (66.2 dB CNEL).

It is important to note that the above impacts are identified based on the available plan-level traffic data for an approximately 30-year time horizon. If and when such impacts would actually occur is unclear and would depend on the pace of buildout and the details of the individual projects implemented under the proposed PMPU.

In addition to the predicted changes in traffic volumes, impacts may occur as a result of the various roadway improvement and modification projects planned under the proposed PMPU. Specific potential impacts due to those roadway projects cannot be predicted because project design details are not available. The roadway changes would not create a significant impact unless they would increase traffic noise levels at a sensitive receptor by at least 3 dB CNEL (possibly 5dB, depending on the resulting noise level). A 3 dB increase correlates to a doubling of acoustical energy, which would generally occur as a result of one of the following.

- Removing acoustical shielding between the roadway and an adjacent noise-sensitive receptor, either by removing a physical barrier or substantially changing the vertical alignment of the street so that existing barrier(s) are no longer efficient.
- Horizontally realigning the roadway so that the distance between the traffic and the receiver is reduced by at least 50 percent.

The potential for these conditions to occur is small because the planning districts are largely built out and there is generally not enough room to substantially realign existing streets. Nonetheless, the possibility of significant traffic noise impacts cannot be ruled out, and the impact is significant **(Impact-NOI-5)**.

Table 4.10-20. Existing and Future Traffic Noise Levels

Planning District/Roadway	Segment	Existing Traffic Noise Levels ¹	Future (2050) with PMPU ¹	Increase Over Existing
PD1: Shelter Island				
N Harbor Drive	Scott St to Nimitz Blvd	67.8	69.0	1.2
Scott Street	Shelter Island Dr to N Harbor Dr	64.1	63.6	-0.5
Shelter Island Drive	Shelter Island Dr (northbound) to Northern Terminus	51.7	52.7	1.0
Shelter Island Drive	Shelter Island Dr (southbound) to Northern Terminus	51.6	52.5	0.9
Shelter Island Drive	Shelter Island Dr to Southern Terminus	58.6	55.5	-3.1
Shelter Island Drive	Scott St to Pedestrian Crosswalk	60.1	59.1	-1.0
Shelter Island Drive	Pedestrian Crosswalk to Roundabout	60.5	58.7	-1.8
Nimitz Boulevard	Rosecrans St to N Harbor Dr	64.7	65.4	0.7
PD2: Harbor Drive				
N Harbor Drive	Nimitz Blvd to Terminal 2/Spanish Landing	71.6	72.8	1.2
N Harbor Drive	Terminal 2/Spanish Landing to Harbor Island Dr	72.1	73.7	1.6
N Harbor Drive	Harbor Island Dr to Winship Ln	74.5	74.9	0.4
N Harbor Drive	Winship Ln to Liberator Way	76.7	74.9	-1.8
N Harbor Drive	Liberator Way to W Laurel St	75.8	73.1	-2.7
Harbor Island Drive	N Harbor Dr to Harbor Island Drive Southern Terminus	64.8	69.4*	4.6*
Harbor Island Drive	Western Terminus to Harbor Island Dr	61.7	67.2*	5.5*
Harbor Island Drive	Harbor Island Dr to Eastern Terminus	60.0	64.7	4.7
PD3: Embarcadero				
N Harbor Drive	W Laurel St to W Hawthorn St	73.3	73.6	0.3
N Harbor Drive	W Hawthorn St to W Grape St	69.6	69.8	0.2
N Harbor Drive	W Grape St to W Ash St	63.7	64.7	1.0
N Harbor Drive	W Ash St to W Broadway	62.6	63.9	1.3
N Harbor Drive	Broadway to W G St	61.7	63.0	1.3
N Harbor Drive	W G St to Pacific Hwy	61.7	62.9	1.2
W Harbor Drive	Pacific Hwy to Kettner Blvd	63.4	65.0	1.6
W Harbor Drive	Kettner Blvd to W Market St	68.7	70.6	1.9
W Harbor Drive	W Market St to Front St	68.5	70.6	2.1
W Harbor Drive	Front St to First Ave	70.4	71.9	1.5

Planning District/Roadway	Segment	Existing Traffic Noise Levels¹	Future (2050) with PMPU¹	Increase Over Existing
E Harbor Drive	First Ave to Convention Center Ct	70.2	71.6	1.4
E Harbor Drive	Convention Center Ct to Fifth Ave	70.2	71.7	1.5
E Harbor Drive	Fifth Ave to Park Blvd	70.5	71.3	0.8
Pacific Highway	W Laurel St to W Hawthorn St	64.9	69.9*	5.0*
Pacific Highway	W Hawthorn St to W Grape St	65.2	69.3	4.1
Pacific Highway	W Grape St to W Ash St	66.2	68.8	2.6
Pacific Highway	W Ash St to W Broadway	65.8	68.9*	3.1*
W Laurel Street	N Harbor Dr to Pacific Hwy	71.4	74.8	3.4
W Hawthorn Street	N Harbor Dr to Pacific Hwy	69.9	70.8	0.9
W Grape Street	N Harbor Dr to Pacific Hwy	69.6	69.8	0.2
W Ash Street	N Harbor Dr to Pacific Hwy	63.0	66.2*	3.2*
Broadway Street	N Harbor Dr to Pacific Hwy	64.2	64.0	-0.2
PD4: Working Waterfront				
E Harbor Drive	Park Blvd to Cesar Chavez Pkwy	71.1	72.6	1.5
E Harbor Drive	Cesar E Chavez Pkwy to Sampson St	67.9	69.4	1.5
E Harbor Drive	Sampson St to Schley St	67.2	67.4	0.2
E Harbor Drive	Schley St to 28th St	66.8	66.9	0.1
E Harbor Drive	28th St to Belt St	68.3	68.1	-0.2
E Harbor Drive	Belt St to National City Boundary	68.9	68.8	-0.1
PD8: Imperial Beach Oceanfront				
Seacoast Drive	Palm Ave to Imperial Beach Blvd	57.7	58.0	0.3
PD9: Silver Strand				
Coronado Bay Road	East of Silver Strand Blvd	58.0	58.1	0.1
PD10: Coronado Bayfront				
Orange Avenue	Pomona Ave to Avenida Del Sol	69.6	69.4	-0.2

Source: Appendix H.

¹ At 50 feet from roadway centerline (dB CNEL).

* Noise levels that result in significant impacts. The impacts occur at adjacent noise-sensitive receptor(s) due to a combination of future noise levels and the associated increase over existing noise levels.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Traffic noise impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant traffic noise impacts (**Impact-NOI-4** and **Impact-NOI-5**). These significant impacts would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the Option 1 boundary within PD3.

Option 1 has the potential to change traffic circulation in the vicinity due to the possibility of closing of North Harbor Drive to automobile circulation. As a result, traffic noise levels adjacent to streets in the vicinity could change, including on streets adjacent to noise-sensitive land uses such as hotels/motels, parks, and residences. Because specific future traffic volumes as a result of Option 1 are currently unknown, future traffic noise levels cannot be calculated and potentially significant traffic noise increases cannot be ruled out. Therefore, it is concluded that significant traffic noise impacts could occur at nearby noise-sensitive receivers due to Option 1 (**Impact-NOI-4**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant traffic noise impacts (**Impact-NOI-4** and **Impact-NOI-5**). These significant impacts would still occur within PD3 under Option 2 because of the same future development that could still occur outside of the Option 2 boundary within PD3.

Option 2 would provide additional park space but would not alter the existing roadway system and is not anticipated to double the traffic volumes on any roadway segment(s). As a result, Option 2 would not generate a substantial traffic noise increase (3 dB or more) at any noise-sensitive receiver and traffic noise impacts would be less than significant, and mitigation would not be required for Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant traffic noise impacts (**Impact-NOI-4** and **Impact-NOI-5**). These significant impacts would still occur within PD3 under Option 3 because of the same future development that could still occur outside of the Option 3 boundary within PD3.

Option 3 would relocate traffic on North Harbor Drive to the east of its current location and could also potentially change traffic circulation on other roadways in the vicinity. As a result, traffic noise levels at adjacent land uses, including at noise-sensitive land uses such as hotels/motels, parks, and residences, could change. Because specific future traffic volumes as

a result of Option 3 are currently unknown, future traffic noise levels cannot be calculated and potentially significant traffic noise increases cannot be ruled out. Therefore, it is concluded that significant traffic noise impacts could occur at nearby noise-sensitive receivers due to Option 3 (**Impact-NOI-4**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Onsite Stationary Sources

The proposed PMPU includes a range of planned or potential future development that would generate various levels of operational noise. Some examples include hotels, mobility hubs, and waterside vessel use from additional slips. A complete list of development projections and the increase in future development authorized by the PMPU is included in Chapter 3, *Project Description*, within Table 3-4, *Baywide Development Projections*. The precise location, design, and operational details of this future development are unknown. In some cases, these uses will be large distances (hundreds to thousands of feet) from the closest noise-sensitive receptors, and the resulting noise levels would likely be below existing ambient noise levels. However, due to the mix of existing uses, including noise-sensitive receptors, within and adjacent to the various planning districts, it is likely that some future development will be close to noise-sensitive receptors. The following sections discuss the noise effects of various types of anticipated development.

Mobility Hubs and Water-Based Transfer Points

Mobility hubs and water-based transfer points are proposed to aid navigation of visitors to and within the Tidelands. Water-based transfer points, which may operate as part of a mobility hub or standalone, would consist primarily of landing areas to load/unload passengers, which would not be expected to generate high noise levels. There are three types of proposed mobility hubs: Connector Mobility Hubs, Local Gateway Mobility Hubs, and Regional Mobility Hubs. Table 4.10-21 summarizes the number and location of mobility hubs proposed as part of the proposed PMPU.

Table 4.10-21. Proposed Mobility Hubs by Planning District

Planning District	Number of Proposed Mobility Hubs by Type		
	Connector Mobility Hub	Local Gateway Mobility Hub	Regional Mobility Hub
PD1	2	1	0
PD2	0	1	1
PD3	0	2	1
PD4	0	0	0
PD7	0	0	0
PD8	1	0	0
PD9	1	0	0
PD0	0	1	0

Notes: PD5 and PD6 are not included because they are not part of the proposed PMPU.

Connector Mobility Hubs would not generate substantial noise levels because they consist of passive and transient uses such as bus stops and bike share stations. Local Gateway Mobility Hubs are generally slightly larger with close access to additional transit facilities, including nearby parking; these hubs would be developed around public open space and/or plazas and would not be expected to substantially increase existing noise levels. Regional Mobility Hubs would be the largest hubs and

may provide new parking facilities that could increase ambient noise levels at nearby noise-sensitive receptors. Guidance from the FTA (2018) provides screening criteria for noise impacts from parking facilities. The noise screening procedure is intended to be conservative and, as such, assumes facilities are operating under relatively high-capacity conditions. In the case of parking facilities, 1,000 vehicle movements (i.e., vehicles either arriving or departing) per hour are assumed. For these assumptions, the FTA indicates that noise would be expected to drop below 50 dBA 1-hour L_{eq} at an unobstructed distance of 125 feet. For locations with intervening buildings (that would provide acoustical shielding), this distance is reduced to 75 feet. The 50 dBA 1-hour L_{eq} corresponds to the most stringent daytime noise limit at noise-sensitive receptors in the relevant municipal codes (County of San Diego, City of San Diego, and City of Coronado). As a result, significant noise impacts may occur if a Regional Mobility Hub is located within 125 feet of a noise-sensitive receptor (**Impact-NOI-6**). As noted in Table 4.10-21, Regional Mobility Hubs are only proposed in PD2 and PD3.

Waterside Slips/Berthing

Increases in waterside slips are proposed in PD1, PD2, PD3, PD9, and PD10. The increases are relatively small in proportion to existing conditions, ranging from 3 percent in PD1 (100 proposed versus 2,946 existing) to 29 percent in PD3 (150 proposed versus 523 existing). Assuming the increases cause a corresponding increase in overall activity, noise increases would be up to 1.1 dB, which would be inaudible, and the impact would be less than significant.

Passive Uses

The proposed PMPU includes various uses that can be considered passive from a noise perspective. These are facilities that do not include permanent noise sources and which people will use temporarily without generating high noise levels. Examples include sidewalks, promenades, trails, bike paths, and pedestrian bridges. Noise levels from these uses would be less than significant.

Commercial Uses and Recreational Open Space

Planned or potential future development under the proposed PMPU could include a range of commercial uses and recreational open space. Commercial uses could include, but are not limited to, hotels, restaurants, retail, meeting space, marine services, and secondary uses such as aquaculture. Commercial uses may include noise sources associated with various building systems such as mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] systems; air handlers; cooling towers; exhaust fans), plumbing systems (e.g., boilers, pumps), and trash compactors. Commercial uses and recreational open space can also generate noise due to parking lots and outdoor activity areas. The potential noise levels from building systems can vary dramatically depending on the type, size, number, and location of equipment items. Example noise levels were obtained from a prior study conducted for a large hotel. Manufacturers' data for individual mechanical equipment items indicate sound power levels of approximately 81 to 106 dBA, which equates to noise levels of 46 to 71 dBA at a distance of 50 feet.⁷ With noise limits in the range of 40 to 65 dBA 1-hour L_{eq} , depending on the city, the receiving land use, and the time of day, it is clear that noise levels from commercial developments could exceed local standards if projects are located

⁷ $SPL = SWL - 20 \times \log(D) - 0.6$, where SPL is the sound pressure level (noise level) in dBA, SWL is the sound power level in dBA, and D is the distance in feet.

close to existing noise-sensitive receptors. This would be a significant impact prior to mitigation (**Impact-NOI-7**).

Planned development within PD2, PD3, and PD8 would be similar to the existing development. As a result, noise from many day-to-day activities would be similar to the existing ambient environment. However, higher noise levels may be associated with outdoor uses that have amplified music, such as patios or pool decks, especially those associated with restaurants and bars. Noise from these areas could occur regularly (often daily), but noise levels would likely vary throughout the year (for instance, many uses would be busier during the summer). It is also possible that some of the proposed new developments, including parks, could host less frequent but larger outdoor special events such as weddings, exhibits, social gatherings, fundraisers, concerts, music festivals, and art exhibits, which would be attended by large numbers of people and would include live or recorded music. Although noise from outdoor operations would be regulated by the local noise ordinance, noise from outdoor events and activities could exceed relevant noise standards, which is considered a significant impact prior to mitigation (**Impact-NOI-8**).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Noise impacts from onsite stationary sources associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant operational noise impacts from stationary sources (**Impact-NOI-6**, **Impact-NOI-7**, and **Impact-NOI-8**). These significant impacts would still occur within PD3 under Option 1 because of the same future development that could still occur outside of the Option 1 boundary within PD3.

Passive uses at the Waterfront Destination Park created under Option 1, such as people walking, sitting, talking, picnicking, or exercising, would create low operational noise levels. These noise levels would not substantially change the existing ambient noise in the vicinity and the noise impacts from these passive uses would be less than significant. Consequently, no significant noise impacts associated with Regional Mobility Hubs, or commercial land uses would occur under Option 1 and the changes this option would propose within PD3. However, high noise levels could be generated if special events are conducted at the park, especially if these events include amplified speech, live or recorded music, and/or large crowds. Noise levels from such events could potentially exceed applicable noise thresholds at nearby noise-sensitive receptors and the impact would be significant (**Impact-NOI-8**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in significant operational noise impacts from stationary sources (**Impact-NOI-6**, **Impact-NOI-7**, and **Impact-NOI-8**). These significant impacts would still occur within PD3 under Option 2

because of the same future development that could still occur outside of the Option 2 boundary within PD3.

Passive uses at the park created under Option 2, such as people walking, sitting, talking, picnicking, or exercising, would create low operational noise levels. These noise levels would not substantially change the existing ambient noise in the vicinity, and the noise impacts from these passive uses would be less than significant. Consequently, no significant noise impacts associated with Regional Mobility Hubs, or commercial land uses would occur under Option 2 and the changes this option would propose within PD3. However, high noise levels could be generated if special events are conducted at the park, especially if these events include amplified speech, live or recorded music, and/or large crowds. Noise levels from such events could potentially exceed applicable noise thresholds at nearby noise-sensitive receptors and the impact would be significant (**Impact-NOI-8**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including in PD3, would result in significant operational noise impacts from stationary sources (**Impact-NOI-6**, **Impact-NOI-7**, and **Impact-NOI-8**). These significant impacts would still occur within PD3 under Option 3 because of the same future development that could still occur outside of the Option 3 boundary within PD3.

Passive uses at the park created under Option 3, such as people walking, sitting, talking, picnicking, or exercising would create low operational noise levels. These noise levels would not substantially change the existing ambient noise in the vicinity, and the noise impacts from these passive uses would be less than significant. Consequently, no significant noise impacts associated with Regional Mobility Hubs, or commercial land uses would occur under Option 2 and the changes this option would propose within PD3. However, high noise levels could be generated if special events are conducted at the park, especially if these events include amplified speech, live or recorded music, and/or large crowds. Noise levels from such events could potentially exceed applicable noise thresholds at nearby noise-sensitive receptors and the impact would be significant (**Impact-NOI-8**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

There are no proposed PMPU Element policies that would directly result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project that exceed standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Impact Determination and Mitigation

Significant Impacts

Impact-NOI-1: Exceed Thresholds at Parks During Construction. Proposed construction activities may exceed the construction noise thresholds during permissible construction hours, as summarized in Table 4.10-17 (i.e., 75 dBA L_{eq} 1-hour average for projects in Coronado, 75 dBA L_{eq} 8-hour average for projects in Imperial Beach, and 75 dBA L_{eq} 12-hour average for projects in San

Diego), at existing parks. These impacts could occur if one or more project construction phase(s) occur within the relevant screening distances of a park, as identified in Table 4.10-19. (Actual impact distances could be shorter depending on site-specific details such as ground conditions and the presence of any acoustical screening.)

Impact-NOI-2: Exceed Thresholds at Other Noise-Sensitive Receptors During Construction.

Proposed construction activities may exceed the construction noise thresholds during permissible construction hours, as summarized in Table 4.10-17 (i.e., 75 dBA L_{eq} 1-hour average for projects in Coronado, 75 dBA L_{eq} 8-hour average for projects in Imperial Beach, and 75 dBA L_{eq} 12-hour average for projects in San Diego), at existing noise-sensitive receptors. These impacts could occur if one or more project construction phase(s) occur within the relevant screening distances of noise-sensitive receptors, as identified in Table 4.10-19. (Actual impact distances could be shorter depending on site-specific details such as including ground conditions and the presence of any acoustical screening.)

Impact-NOI-3: Exceed Local Noise Limits for Construction During Prohibited Hours. Although construction during prohibited hours (evening, nighttime, Sundays, or holidays) is not specifically proposed as part of the PMPU, it cannot be ruled out. Unless associated noise levels at existing noise-sensitive receptors can be reduced to comply with the stationary noise source limits of the applicable municipal code (refer to Tables 4.10-8, 4.10-10, and 4.10-13), construction noise impacts will be significant.

Impact-NOI-4: Excessive Traffic Noise Increases on Existing Roadways Above Local Standards.

Traffic on some roadways may increase noise levels at existing noise-sensitive receptors by 3 dB CNEL or more to a level that is above the local standards or guidelines of the applicable member city. This impact may occur at hotels/motels, parks, and homes adjacent to segments of Harbor Island Drive, Pacific Highway, and West Ash Street.

Impact-NOI-5: Substantial Traffic Noise Increases Due to Roadway Improvements and Modifications. This impact may occur for proposed roadway improvement and modification projects if they remove acoustical shielding between the roadway and an adjacent noise-sensitive receptor, or horizontally realign the roadway so that the distance between traffic and the receiver is reduced by at least 50 percent.

Impact-NOI-6: Significant Noise Impact from Regional Mobility Hubs. Regional Mobility Hubs that provide new parking facilities may generate significant noise impacts if located within 125 feet of a noise-sensitive receptor.

Impact-NOI-7: Exceed Local Noise Limits for Commercial Developments. Building systems (e.g., mechanical equipment, plumbing systems, trash compactors) and other activities at commercial developments may generate noise at existing noise-sensitive receptors in excess of applicable local limits for stationary noise sources.

Impact-NOI-8: Exceed Local Noise Limits for Outdoor Use Areas and Outdoor Special Events. If new developments include outdoor use areas (e.g., parks, outdoor dining, patios, roof decks, pool decks) with amplified music, or host large outdoor special events such as weddings, exhibits, social gatherings, fundraisers, concerts, music festivals, and art exhibits, such activities may exceed applicable local noise limits at existing noise-sensitive receptors, especially if events are attended by large numbers of people or would include live or recorded music.

Mitigation Measures

For **Impact-NOI-1:**

MM-NOI-1: Notify Users of Impacted Parks. As part of a development application, the project proponent shall determine whether construction noise will exceed 75 dBA L_{eq} at any nearby parks, if applicable. This determination may be based on the construction noise impact (screening) distances summarized in Table 4.10-19. Alternatively, the project proponent may retain a qualified acoustical consultant, approved by the District, to conduct a new or more detailed analysis based on project- and site-specific details. If construction noise levels at parks are determined to exceed 75 dBA L_{eq} , the project proponent or its construction contractor shall post public noticing at affected parks not less than 48 hours prior to the start of construction activities. The signage shall notify users of possible high noise levels and provide details of alternative parks that are open nearby. The project proponent shall include this measure in the construction specification documents for the project. Prior to issuance of the construction specification documents for bid, the project proponent shall submit a copy of the documents and the proposed public notice sign to the District's Development Services Department for approval. Prior to the commencement of construction activities, the project proponent shall submit documentation (including photographs) to the District's Development Services Department demonstrating compliance with this measure.

For **Impact-NOI-2:**

MM-NOI-2: Avoid or Reduce Construction Noise from Pile Driving. During construction activities, the project proponent shall require all contractors to take steps to reduce pile driving noise, if any, associated with the project by implementing one of the following noise reduction methods:

- Avoid impact and vibratory pile driving by using quieter alternative installation methods, such as press-in piles or drilled piles (e.g., cast-in-drilled-hole, poured-in-place piles).
- Use an acoustical shroud around impact pile driving. The shroud will be constructed of materials that provide a minimum sound transmission class of 28 (examples include sound-rated acoustical blankets).

MM-NOI-3: Implement General Best Practices for Construction Noise Abatement. During construction of future projects, the project proponent shall require all contractors to adhere to the following noise abatement measures:

- All construction equipment and vehicles using internal combustion engines will be equipped with mufflers; air-inlet silencers where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification.
- All mobile or fixed construction equipment used on the project that is regulated for noise output by a local, State, or Federal agency will comply with such regulation while in the course of project activity.
- All construction equipment will be properly maintained and serviced.
- All construction equipment will be operated only when necessary and will be switched off when not in use.

- Construction employees will be trained in the proper operation and use of the equipment to avoid careless or improper operation of equipment that could increase noise levels.
- Construction site speed limits will be established and enforced during the construction period.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only.
- The contractor will provide advance written notification of construction activities to residences within 300 feet of the construction site for projects that do not include pile driving, and to residences within 700 feet of the construction site for projects that include pile driving. Notification will include a brief overview of the proposed construction activity and its purpose and schedule. It also will include the name and contact information of the project manager or representative responsible for resolving any noise concerns.

MM-NOI-4: Install Temporary Noise Barriers to Shield Noise-Sensitive Receptors from Excessive Construction Noise Levels. As part of a development application, the project proponent shall ascertain whether construction noise will exceed 75 dBA L_{eq} at any noise-sensitive receptors. If so, prior to commencing construction, the project proponent shall install temporary noise barrier(s) between construction activities and noise-sensitive receptor(s) where noise levels exceed 75 dBA L_{eq} . Barriers may be constructed around the site perimeter or, when construction activities are restricted to a smaller portion of the site, around that smaller portion of the site, or around any noisy stationary construction equipment, such as generators or dewatering pumps. All such barriers must be at least 8 feet high and of sufficient height to break the line of sight between the construction equipment and the ground floor of any noise-sensitive receiver. These barriers shall be constructed in one of the following ways that the project proponent establishes, in writing and to the satisfaction of the District, will achieve a minimum sound transmission class (STC) rating of 28:

- From acoustical blankets hung over or from a supporting frame. The blankets should be firmly secured to the framework. The blankets should be overlapped by at least 4 inches at seams and taped and/or closed with hook-and-loop fasteners (i.e., Velcro®) so that no gaps exist. The largest blankets available should be used in order to minimize the number of seams. The blankets shall be draped to the ground to eliminate any gaps at the base of the barrier.
- From commercially available acoustical panels lined with sound-absorbing material (the sound-absorptive faces of the panels should face the construction equipment).
- From common construction materials such as plywood.

For **Impact-NOI-3**:

MM-NOI-5: Prohibit Exterior Construction Activities Outside of the Permitted Construction Hours. The project proponent shall not conduct typical exterior construction activities during the prohibited hours summarized in Table 4.10-17 (based on the city in which the construction site is located). Also, material or equipment deliveries and collections shall be prohibited during these hours to the extent feasible. Except for construction personnel specifically working on interior construction tasks within a completed building shell, construction personnel shall not start construction equipment on the job site during the prohibited hours. Subject to the District's review and approval, non-typical time-sensitive

construction activities may occur during the hours summarized in Table 4.10-17. Examples may include, but are not limited to, large concrete pours that must occur continuously once started, or activities requiring road closures that are deemed to be safer or less disruptive when implemented at night.

For **Impact-NOI-4:**

MM-NOI-6: Conduct Project-Specific Traffic Noise Analyses for Projects that Would Double the Traffic Volume on One or More Affected Streets. As part of a development application, the project proponent shall ascertain whether project implementation would double the vehicular traffic volume on any affected street(s). If no such increase is predicted, then no further traffic noise analysis is required. However, if such an increase is anticipated, the project proponent shall retain a qualified traffic consultant and a qualified acoustical consultant, each approved by the District. The consultants shall identify the roadways that would be affected by the project, quantify daily traffic volumes with and without the project, and determine what, if any, additional analysis is required to quantify traffic noise levels and identify potential noise control measures. If significant impacts are predicted, the assessment shall identify traffic noise abatement or reduction measures to be implemented by the project proponent as necessary to ensure project traffic does not cause: (1) an increase of 3 dB CNEL or more to a level that is above the local standards or guidelines of the applicable member city, or (2) any traffic noise increase of 5 dB CNEL or more, at a noise-sensitive receptor. Such measures may include, but would not be limited to:

- Noise barriers.
- Quiet pavement.
- Increased separation between roadways and sensitive land uses.
- Upgrades, such as retrofitted sound-rated windows and doors for impacted sensitive buildings.
- Traffic calming or other measures to reduce traffic speeds.

For **Impact-NOI-5:**

MM-NOI-7: Design Roadway Improvement and Modification Projects to Avoid Noise Increases Greater than 3 dB CNEL. During the design phase for specific roadway improvements and modifications, the project proponent shall ensure the proposed design does not: (1) remove existing noise barriers (if any) between the roadway and adjacent noise-sensitive receptors without replacing such barriers with like-kind, or (2) reduce the distance between the traffic and the receiver by 50 percent or more.

For **Impact-NOI-6:**

MM-NOI-8: For Regional Mobility Hubs Within 125 feet of Noise-Sensitive Receptors, Design and Construct Facilities to Control Noise from New Sources Such as Parking Lots. During the architectural and engineering design phases of a Regional Mobility Hub, and prior to the District's approval of a Regional Mobility Hub, the project proponent shall retain an acoustical consultant approved by the District to evaluate the potential noise impacts of new parking lots or other proposed potential noise sources. The consultant shall assess the project details and prepare a written report to the District that identifies what, if any, additional

analysis is required to quantify operational noise levels and potential noise abatement measures. Based on the consultant's written report, the District shall determine whether additional technical analysis is necessary to quantify operational noise levels and to identify noise abatement measures in order to meet the noise standards specified below. Noise abatement or reduction measures, if required, may include, but are not limited to, reorientation or relocation of noise sources, administrative controls on the times and intensity of use, control of mechanical equipment noise (such as parking garage exhaust fans), or the addition of noise barriers or other acoustical screening. Noise abatement or reduction measures shall be implemented by the project proponent to ensure the Regional Mobility Hub does not cause: (1) an increase of 3 dBA or more over ambient noise levels resulting in a combined noise level greater than the applicable municipal code standard (refer to Tables 4.10-8, 4.10-10, and 4.10-13) at a noise-sensitive receptor, or (2) any increase of 5 dBA or more over ambient noise levels at a noise-sensitive receptor.

For **Impact-NOI-7**:

MM-NOI-9: Design and Construct New Commercial Uses to Control Noise from All Onsite Equipment and Activities. The project proponent shall design and construct all proposed commercial uses to ensure their compliance with the applicable municipal code noise limits (refer to Tables 4.10-8, 4.10-10, and 4.10-13) at noise-sensitive receptors. To achieve this performance standard, during the architectural and engineering design, and prior to the District's approval of the applicable future development project, the project proponent shall retain an acoustical consultant approved by the District to evaluate the design and provide written recommendations to the District, as necessary, to abate or reduce noise from all onsite equipment and activities. Such recommendations may include, but are not limited to, changes in site layout or equipment locations; sound power limits or specifications; rooftop parapet walls; acoustical absorption, louvers, screens, or enclosures; intake and exhaust silencers; or administrative controls (such as restricting certain activities to daytime hours). The District shall identify the noise abatement or reduction measures to be implemented by the project proponent which are necessary to ensure compliance with the applicable municipal code noise limits. If such compliance is infeasible, a project-level environmental review shall be required.

For **Impact-NOI-8**:

MM-NOI-10: Design and Operate Outdoor Activity Areas to Control Operational Noise. The project proponent and any future owner/operator of proposed developments shall design, construct, and operate outdoor activity areas (e.g., outdoor dining areas, patios, roof decks, pool decks), to ensure their compliance with the applicable municipal code noise limits (refer to Tables 4.10-8, 4.10-10, and 4.10-13) at noise-sensitive receptors. To achieve this performance standard, as part of the site-specific environmental review of a proposed project, the project proponent shall retain an acoustical consultant approved by the District to evaluate the design and provide written recommendations to the District, as necessary, to abate or reduce noise from all outdoor activity areas. Such recommendations may include, but are not limited to, changes in location and layout, sound power limits or specifications for audio systems, loudspeaker placement and direction, acoustical shielding (barriers, walls, or roofs), or acoustical absorption. The District shall identify the noise abatement or reduction measures to be implemented by the project proponent that are necessary to ensure compliance with the applicable municipal code noise limits. If such compliance is infeasible, a project-level environmental review shall be required.

MM-NOI-11: Incorporate Operational/Contract Specifications to Minimize Exterior Special Event Noise and Regulate Special Events at New Parks. Special events may include occasional outdoor gatherings, public dances, shows, sporting events, entertainment events (including concerts), parades, and civic functions. Such events at new parks proposed under the PMPU shall be properly regulated for noise control and shall observe the requirements identified below. In addition, the project proponent and any future owner/operator of proposed developments hosting exterior special events shall observe the following requirements and incorporate them into the contract specifications for outdoor events:

1. Any special event at a new park and any exterior special events at proposed developments shall not exceed the applicable municipal code noise limits (refer to Tables 4.10-8, 4.10-10, and 4.10-13) at a noise-sensitive receptor.
2. Any event that fails to comply with requirement 1, above, shall only be permitted if an applicable event permit, or variance or exemption from the code, has been sought and granted by the appropriate agency (city or District).
3. The project shall comply with all city and District requirements related to hosting outdoor events.

Level of Significance After Mitigation

Construction

Implementation of **MM-NOI-1** would reduce **Impact-NOI-1** to less than significant by redirecting noise-sensitive park users to alternative locations away from construction noise.

Implementation of **MM-NOI-2**, **MM-NOI-3**, and **MM-NOI-4** would reduce **Impact-NOI-2**. In some cases, noise impacts may be reduced to less than significant. However, because the design and location of future development projects allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts. As a result, it may not be possible to fully reduce all construction noise levels to comply with the applicable 75 dBA L_{eq} noise limits. Limitations may include the inability to use alternative pile driving methods or acoustical shrouds due to engineering, constructability, or safety considerations. In addition, it may not be practical to construct efficient temporary noise barriers due to local terrain conditions, or engineering, constructability, or safety considerations. **Impact-NOI-2** would remain significant and unavoidable.

Implementation of **MM-NOI-5** would reduce **Impact-NOI-3** to less than significant, if it can be fully implemented. However, because the design and location of future development projects allowed under the proposed PMPU are unknown at this time, it is not possible to determine the extent to which construction activity may be feasibly constrained to the locally-permitted construction hours. Certain construction activities (e.g., large concrete pouring operations) may have to occur overnight. As a result, **Impact-NOI-3** would remain significant and unavoidable.

Operation

Implementation of **MM-NOI-6** would reduce **Impact-NOI-4**. In some cases, traffic noise impacts may be reduced to less than significant. However, because the timing and location of specific impacts due to projects allowed under the proposed PMPU are unknown at this time, it is not possible to quantify

whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts. As a result, it may not be possible to fully mitigate all traffic noise levels. **Impact-NOI-4** would remain significant and unavoidable.

Implementation of **MM-NOI-7** would reduce **Impact-NOI-5** to less than significant if it can be fully implemented. However, because the design and location of future roadway improvement and modification projects allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts. As a result, **Impact-NOI-5** would remain significant and unavoidable.

Implementation of **MM-NOI-8** would reduce **Impact-NOI-6** to less than significant if it can be fully implemented. However, because the design and location of future Regional Mobility Hub projects allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts. As a result, **Impact-NOI-6** would remain significant and unavoidable.

Implementation of **MM-NOI-9** would reduce **Impact-NOI-7** to less than significant if it can be fully implemented. However, because the design and location of future commercial projects allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts. As a result, **Impact-NOI-7** would remain significant and unavoidable.

Implementation of **MM-NOI-10** and **MM-NOI-11** would reduce **Impact-NOI-8** to less than significant if they can be fully implemented. However, because the design and location of future outdoor activity areas (including parks) and the details of outdoor special events allowed under the proposed PMPU are unknown at this time, it is not possible to quantify whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing the impacts. As a result, **Impact-NOI-8** would remain significant and unavoidable.

Threshold 2: Result in generation of excessive groundborne vibration or groundborne noise levels?

Impact Analysis

Impact of Water and Land Uses

Construction

The potential for significant vibration impacts would depend on the type of construction equipment used and the proximity of the work to sensitive receptors. As described in Section 4.10.3.6, *Vibration-Sensitive Land Uses*, all buildings (regardless of land use) are considered sensitive with respect to potential damage effects. Although building damage due to construction activities is rare, District tenants who occupy older buildings may have increased concerns about this potential impact. Buildings that would be sensitive with respect to human annoyance impacts are residences (including hospitals, nursing facilities, or intermediate care facilities with overnight patient stays), schools and childcare facilities (typically only vibration sensitive during hours of operation), and hotels and other guest lodgings. Certain occupied buildings within parks may also be considered sensitive. The sensitivity would depend on whether the uses in the building would coincide with any

nearby construction activity (for instance, the Bayside Performance Center may be considered sensitive but may not be in use during typical construction hours).

Potential Building Damage

Using the methodology described in Section 4.10.6.1, the distances for potential vibration damage impacts at various receiver building categories were calculated for a range of construction equipment. The results are summarized in Table 4.10-22. These can be considered screening distances, beyond which a given construction activity would not be expected to generate significant groundborne vibration with respect to potential building damage. While all receiver building categories were included in the analysis, it is noted the likelihood of projects occurring close to the most sensitive building categories (“Extremely Fragile Historic Buildings, Ruins, Ancient Monuments” and “Fragile Buildings”) is considered very low.

A project that employs any of the construction equipment types included in the table has the potential to generate groundborne vibration impacts if the activity occurs within the specified distances. Depending on the equipment used, these distances range from 1 to 168 feet. Because the exact building categories and their distances from future construction work are currently not known, it is possible that proposed or future projects would exceed the applicable thresholds for potential building damage, which would be a significant impact prior to mitigation (**Impact-NOI-9**).

Table 4.10-22. Distances to Potential Vibration Damage from Program Construction

Equipment Item	Building Category:	Extremely Fragile Historic Buildings, Ruins, Ancient Monuments	Fragile Buildings	Historic Buildings	Older Residential Structures	New Residential Structures	Modern Industrial/Commercial Buildings
	Vibration Damage Impact Criteria, PPV, in/s ¹	0.08	0.1	0.25	0.3	0.5	0.5
Pile driver (impact or vibratory)	Distance to Impact Criteria (feet)	168	138	60	51	32	32
Hydraulic breaker ²		68	56	25	21	13	13
Vibratory roller		61	50	22	19	12	12
Large bulldozer ³		28	23	10	9	6	6
Drill ⁴		28	23	10	9	6	6
Jackhammer		12	10	5	4	3	3
Small bulldozer ⁵		2	2	1	1	1	1

Source: Appendix H.

¹ All criteria are based on the values for continuous/frequent intermittent sources (all of the anticipated sources fall into this category).

² Also commonly referred to as a hoe ram.

³ Considered representative of other heavy earthmoving equipment such as excavators, graders, and backhoes.

⁴ Based on caisson drilling.

⁵ Considered representative of other smaller earthmoving equipment such as a Bobcat® and skid steer.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction vibration damage impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction-related vibration impact associated with the potential to cause building damage (**Impact-NOI-9**). This significant impact would still occur within PD3 under Option 1 because of the same future development that could still occur outside of the Option 1 boundary within PD3.

The types of construction that would occur for Option 1 would fall within the range of scenarios analyzed above. The distances for potential vibration damage impacts at various receiver building categories, due to a range of construction equipment, are summarized in Table 4.10-22. These can be considered screening distances, beyond which a given construction activity would not be expected to cause building damage. The most vibration-sensitive structures close to Option 1 include historical buildings, as identified in Section 4.4, *Cultural Resources*, Section 4.4.4.4, *Project Impacts and Mitigation Measures*). Referring to Table 4.10-22 and assuming Option 1 would not require pile driving, vibration damage impacts could occur at structures located within 25 feet of the construction area. The impact distance would increase to 60 feet if pile driving is required. Depending on the final construction methods and project footprint, sensitive receptors may exist within the calculated impact distances, and construction activities could exceed the applicable thresholds for potential building damage, which would be a significant impact (**Impact-NOI-9**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction-related vibration impact associated with the potential to cause building damage (**Impact-NOI-9**). This significant impact would still occur within PD3 under Option 2 because of the same future development that could still occur outside of the Option 2 boundary within PD3.

The types of construction that would occur for Option 2 would fall within the range of scenarios analyzed above. The distances for potential vibration damage impacts at various receiver building categories, due to a range of construction equipment, are summarized in Table 4.10-22. These can be considered screening distances, beyond which a given construction activity would not be expected to cause building damage. The most vibration-sensitive structures close to Option 2 include historical buildings as identified in Section 4.4.4.4. Referring to Table 4.10-22 and assuming Option 2 would not require pile driving, vibration damage impacts could occur at structures located within 25 feet of the construction area. The impact distance would increase to 60 feet if pile driving is required. Depending on the final construction methods and project

footprint, sensitive receptors may exist within the calculated impact distances, and construction activities could exceed the applicable thresholds for potential building damage, which would be a significant impact (**Impact-NOI-9**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction-related vibration impact associated with the potential to cause building damage (**Impact-NOI-9**). This significant impact would still occur within PD3 under Option 3 because of the same future development that could still occur outside of the Option 3 boundary within PD3.

The types of construction that would occur for Option 3 would fall within the range of scenarios analyzed above. The distances for potential vibration damage impacts at various receiver building categories, due to a range of construction equipment, are summarized in Table 4.10-22. These can be considered screening distances, beyond which a given construction activity would not be expected to cause building damage. The most vibration-sensitive structures close to Option 3 include historical buildings as identified in Section 4.4.4.4. Referring to Table 4.10-22 and assuming Option 3 would not require pile driving, vibration damage impacts could occur at structures located within 25 feet of the construction area. The impact distance would increase to 60 feet if pile driving is required. Depending on the final construction methods and project footprint, sensitive receptors may exist within the calculated impact distances, and construction activities could exceed the applicable thresholds for potential building damage, which would be a significant impact (**Impact-NOI-9**). However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Potential Human Annoyance

Using the methodology described in Section 4.10.6.1, the distances at which various levels of human vibration perception are expected were calculated for a range of construction equipment. The results are summarized in Table 4.10-23. While exact vibration sensitivity varies by individual, the “distinctly perceptible” criterion of 0.04 in/s PPV is selected as the threshold of impact. For many construction scenarios that could occur under the proposed PMPU, higher levels may be tolerable for several reasons. For instance, the duration of perceptible vibration may be very brief or vibration could occur at times when residents/occupants are out of the buildings or engaged in activities that are not particularly sensitive to vibration. Nonetheless, the criterion of 0.04 in/s PPV is applied uniformly to assess impacts at any affected sensitive receptor. The distances at which a vibration is reduced to a level of 0.04 in/s PPV can be considered screening distances, beyond which a given construction activity would not be expected to generate significant groundborne vibration with respect to potential human annoyance. A project that employs any of the construction equipment types included in Table 4.10-23 has the potential to generate human annoyance if the activity occurs within the specified distances of sensitive buildings for a PPV of 0.04 in/s. This would be a significant impact prior to mitigation at any time at a residential building, during operational hours at any schools or childcare facility, or between the hours of 7:00 p.m. to 7:00 a.m. at any hotel or other guest lodging (**Impact-NOI-10**).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction vibration annoyance impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction-related vibration impact associated with the potential to cause human annoyance (**Impact-NOI-10**). This significant impact would still occur within PD3 under Option 1 because of the same future development that could still occur outside of the Option 1 boundary within PD3.

The types of construction that would occur for Option 1 would fall within the range of scenarios analyzed above. The distances at which “distinctly perceptible” groundborne vibration of 0.04 in/s PPV would occur due to a range of construction equipment are summarized in Table 4.10-23. These can be considered screening distances, beyond which a given construction activity would not be expected to cause human annoyance. Referring to Table 4.10-22 and assuming Option 1 would not require pile driving, vibration annoyance impacts could occur at sensitive buildings located within 128 feet of the construction area. The impact distance would increase to 316 feet if pile driving is required. Depending on the final construction methods and project footprint, the closest residences (condominiums on the east side of Pacific Highway) and hotels may be within the calculated impact distances, and construction activities could exceed the applicable thresholds for human annoyance. This would be a significant impact (**Impact-NOI-10**) at any time at a residential building, or between the hours of 7:00 p.m. to 7:00 a.m. at any hotel. However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant construction-related vibration impact associated with the potential to cause human annoyance (**Impact-NOI-10**). This significant impact would still occur within PD3 under Option 2 because of the same future development that could still occur outside of the Option 2 boundary within PD3.

The types of construction that would occur for Option 2 would fall within the range of scenarios analyzed above. The distances at which “distinctly perceptible” groundborne vibration of 0.04 in/s PPV would occur due to a range of construction equipment are summarized in Table 4.10-23. These can be considered screening distances, beyond which a given construction activity would not be expected to cause human annoyance. Referring to Table 4.10-22 and assuming Option 2 would not require pile driving, vibration annoyance impacts could occur at sensitive buildings located within 128 feet of the construction area. The impact distance would increase to 316 feet if pile driving is required. Depending on the final construction methods and project footprint, the closest residences (condominiums on the east side of Pacific Highway) and hotels may be within the calculated impact distances, and construction activities could exceed

the applicable threshold for human annoyance. This would be a significant impact (**Impact-NOI-10**) at any time at a residential building, or between the hours of 7:00 p.m. to 7:00 a.m. at any hotel. However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a significant construction-related vibration impact associated with the potential to cause human annoyance (**Impact-NOI-10**). This significant impact would still occur within PD3 under Option 3 because of the same future development that could still occur outside of the Option 3 boundary within PD3.

The types of construction that would occur for Option 3 would fall within the range of scenarios analyzed above. The distances at which “distinctly perceptible” groundborne vibration of 0.04 in/s PPV would occur due to a range of construction equipment are summarized in Table 4.10-23. These can be considered screening distances, beyond which a given construction activity would not be expected to cause human annoyance. Referring to Table 4.10-22 and assuming Option 3 would not require pile driving, vibration annoyance impacts could occur at sensitive buildings located within 128 feet of the construction area. The impact distance would increase to 316 feet if pile driving is required. Depending on the final construction methods and project footprint, the closest residences (condominiums on the east side of Pacific Highway) and hotels may be within the calculated impact distances, and construction activities could exceed the applicable threshold for human annoyance. This would be a significant impact (**Impact-NOI-10**) at any time at a residential building, or between the hours of 7:00 p.m. to 7:00 a.m. at any hotel. However, this would not be an additional or more severe impact than buildout of the proposed PMPU without Option 3.

Table 4.10-23. Distances to Potential Human Effects from Program Construction Vibration

Equipment Item	Human Perceptibility:	Barely Perceptible ²	Distinctly Perceptible (Threshold of Impact)	Strongly Perceptible ²	Severe ²
	Vibration Perception Criteria, PPV, in/s ¹	0.01	0.04	0.1	0.4
Pile driver (impact or vibratory)	Distance to Impact Criteria (feet)	1,112	316	138	39
Hydraulic breaker ³		450	128	56	16
Vibratory roller		399	113	50	14
Large bulldozer ⁴		183	52	23	7
Drilling ⁵		183	52	23	7
Jackhammer		79	23	10	3
Small bulldozer ⁶		9	3	2	1

Source: Appendix H.

¹ All criteria are based on the values for continuous/frequent intermittent sources (all of the anticipated sources fall into this category).

² Included for informational purposes only.

³ Also commonly referred to as a hoe ram.

⁴ Considered representative of other heavy earthmoving equipment such as excavators, graders, and backhoes.

⁵ Based on caisson drilling.

⁶ Considered representative of other smaller earthmoving equipment such as a Bobcat® and skid steer.

Onsite Stationary Sources

Most land uses do not generate substantial levels of groundborne vibration. Typical mechanical equipment could produce some perceptible vibration within the buildings at which they are installed, but such equipment would not be large enough to generate noticeable groundborne vibration at offsite locations. Vibration impacts from onsite stationary sources would be less than significant.

Impacts of Proposed PMPU Element Policies

There are no proposed PMPU Element policies that would directly result in generation of excessive groundborne vibration or groundborne noise levels.

Impact Determination and Mitigation

Significant Impacts

Construction

Impact-NOI-9: Exceed Caltrans Guideline Criteria for Potential Building Damage During Construction. Vibration levels due to various construction activities could exceed recommended criteria for potential building damage. The actual impacts, if any, would depend on the equipment used and the distance to the affected structure(s). Specifically, a significant impact would occur if project construction occurs within one or more of the threshold distances identified in Table 4.10-22 based on the actual construction equipment to be used.

Impact-NOI-10: Exceed Caltrans Guideline Criteria for Potential Human Annoyance at Sensitive Receptors During Project Construction. Vibration levels due to various construction activities could exceed recommended criteria for potential human annoyance. The actual impacts, if any, would depend on the equipment used and the distance to the affected sensitive buildings. Specifically, a significant impact would occur if project construction occurs within the “distinctly perceptible” threshold distance of an occupied sensitive building, as identified in Table 4.10-23, based on the actual construction equipment to be used.

Operation

No significant operational groundborne vibration impacts were identified.

Mitigation Measures

Construction

For **Impact-NOI-9:**

MM-NOI-12: Avoid or Reduce Potentially Damaging Vibration at Nearby Buildings from Project Construction. During construction activities, the project proponent shall avoid working within the potential damage threshold distances identified in Table 4.10-22 based on the construction equipment to be used and the type, age, and condition of nearby structures (including structures owned or occupied by neighboring District tenants). In the event the District determines that it is not feasible for the project proponent to avoid construction

activities within the potential damage threshold distances, the project proponent shall reduce the potential impact to the maximum extent feasible through the implementation of alternate construction equipment or techniques approved by the District such as, but not limited to, the following:

- Replacing impact pile driving with press-in piles or drilled piles (e.g., cast-in-drilled-hole, poured-in-place piles).
- Using smaller categories of equipment, such as a Bobcat or skid steer instead of full-size graders or bulldozers.

If the District determines that these techniques cannot be fully implemented or are not sufficient to place the affected receivers outside of the applicable threshold distance, then the project proponent shall take the following additional steps to protect buildings within the potential damage threshold distances for construction vibration damage:

- The project proponent/contractor shall retain a qualified structural or geotechnical engineer to conduct preconstruction surveys of neighboring structures (including photographing and/or videotaping) to document existing building conditions for future comparison if any vibration-related damage is suspected or results from construction-related activities.
- Based on professional judgment and review of the specific buildings involved, the structural/geotechnical engineer shall provide written recommendations to the District for updated vibration thresholds and revised impact distances for potentially affected buildings.
- If considered appropriate by the District, the project proponent shall conduct monitoring during construction to check for vibration-related damage during pile driving. Such monitoring may include vibration measurements obtained inside or outside of the buildings or other tests and observations deemed necessary by the District.
- If any damage to existing buildings is determined to occur because of project construction, the project proponent shall be financially responsible for the necessary repairs, structural or cosmetic, to return the damaged building to its pre-existing state.

For **Impact-NOI-10**:

MM-NOI-13: Avoid or Reduce Potentially Annoying Vibration at Occupied Sensitive Buildings During Project Construction. During construction activities, the project proponent shall avoid working within the distinctly perceptible threshold distances identified in Table 4.10-23 from occupied sensitive buildings, based on the construction equipment to be used. In the event the District determines that it is not feasible for the project proponent to avoid construction activities within the potential annoyance threshold distances, the project proponent shall reduce the potential impact to the extent feasible through the implementation of alternate construction equipment or techniques approved by the District such as, but not limited to, the following:

- Replacing impact pile driving with press-in piles or drilled piles (e.g., cast-in-drilled-hole, poured-in-place piles).
- Using smaller categories of equipment, such as a Bobcat or skid steer instead of full size graders or bulldozers.

Operation

No mitigation is required.

Level of Significance After Mitigation

Construction

Implementation of **MM-NOI-12** would reduce **Impact-NOI-9** to less than significant by requiring future project proponents to avoid working within the potential damage threshold distances. In the event that it is not feasible to avoid construction activities within the potential damage threshold distances, **MM-NOI-12** requires the implementation of alternate construction equipment or techniques approved by the District, as well as implementation of additional steps to protect buildings within the potential damage threshold distances. Finally, **MM-NOI-12** would require the project proponent to repair any cosmetic or structural damage that is demonstrated to occur because of groundborne vibration from project construction.

Implementation of **MM-NOI-13** would reduce **Impact-NOI-10**. However, because the design, location, and construction methods of future development projects allowed under the proposed PMPU, as well as the Embarcadero Planning District Options, are unknown at this time, it is not possible to quantify whether and to what extent the recommended mitigation measures would be feasible and effective in abating or reducing groundborne vibration to less than 0.04 in/s PPV at all nearby sensitive receptors. **Impact-NOI-10** would remain significant and unavoidable.

Operation

Impacts would be less than significant and no mitigation is required.

Threshold 3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?

Impact Analysis

Impacts of Water and Land Uses

As discussed in Section 4.10.4.3, *Aircraft Noise*, existing civilian and military installations (airports/airfields) in the vicinity of the tidelands include SDIA, NAS North Island, and NOLF Imperial Beach. The PMPU does not propose any new airports or airstrips, and it would not alter any existing airports or airstrips. While visitor growth anticipated under the proposed PMPU would likely result in some additional passengers travelling through SDIA, the proportion would be very small compared to the overall number of passengers, with 24 million passengers served in 2018 (SDIA 2019). As a result, airstrip and airport noise levels would not change appreciably due to implementation of the proposed PMPU.

Future development under the proposed PMPU would include new noise-sensitive receptors (primarily hotels) that would be subject to noise from aircraft operations. However, as discussed in Section 4.10.6.3, *Policies that May Avoid or Reduce Impacts*, the District would be responsible for

conducting a consistency review of discretionary and ministerial projects to ensure there would be no conflict with the applicable ALUCPs, including with the noise/land use compatibility requirements. This process would address the siting of new noise-sensitive developments, as well as requiring proper design of new buildings to control exterior-to-interior noise transmission and provide acceptable interior noise levels. Such new development would also be subject to Title 24, Part 2, Section 1206.3 of the California Code of Regulations (refer to Section 4.10.5.2, *State Regulations*), which would similarly require exterior-to-interior noise control for any habitable room at noise-sensitive developments. With these processes and requirements in place, all future development would be consistent with the ALUCPs, appropriate exterior-to-interior noise control would be provided, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Airport noise impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to excessive airport noise.

Option 1 does not propose any new airports or airstrips, and it would not alter any existing airports or airstrips. The closest airport to Option 1 is SDIA. As shown on Figure 4.10-2 and in Table 4.10-9, aircraft noise levels at the location of the proposed park would be less than 70 dB CNEL, which would be compatible under the City's noise compatibility guidelines. The impact would be less than significant, and Option 1 would not result in any additional or more severe impacts related to excessive airport noise than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to excessive airport noise.

Option 2 does not propose any new airports or airstrips, and it would not alter any existing airports or airstrips. The closest airport to Option 2 is SDIA. As shown on Figure 4.10-2 and in Table 4.10-9, aircraft noise levels at the location of the proposed park would be less than 70 dB CNEL, which would be compatible under the City's noise compatibility guidelines. The impact would be less than significant, and Option 2 would not result in any additional or more severe impacts related to excessive airport noise than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to excessive airport noise.

Option 3 does not propose any new airports or airstrips, and it would not alter any existing airports or airstrips. The closest airport to Option 3 is SDIA. As shown on Figure 4.10-2 and in Table 4.10-9, aircraft noise levels at the location of the proposed park would be less than 70 dB CNEL, which would be compatible under the City's noise compatibility guidelines. The impact would be less than significant, and Option 3 would not result in any additional or more severe impacts related to excessive airport noise than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

There are no proposed PMPU Element policies that would expose people residing or working in the project area to excessive noise levels from aircraft operations.

Impact Determination and Mitigation

Implementation of the proposed PMPU, with or without Options 1, 2, and 3, would not expose people residing or working in the PMPU area to excessive noise levels within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport. Impacts would be less than significant, and no mitigation measures are required.

4.10.7 Cumulative Impact Analysis

4.10.7.1 Geographic Scope

The geographic scope of analysis for cumulative noise and vibration impacts related to the proposed PMPU (construction and operations) is the area within 1,000 feet of the PMPU area's boundaries. This relatively large distance has been selected because future development under the proposed PMPU may involve pile driving, which has the potential to generate noise impacts over a large area. The geographic scope of analysis for cumulative noise impacts related to traffic is defined by the roadway segments analyzed previously in the assessment of direct noise impacts.

4.10.7.2 Cumulative Effects From Past, Present, and Probable Future Projects

Table 2-2, *Additional Cumulative Plans and Programs*, includes past, present, and probable future projects in the vicinity of the proposed PMPU area. Each of these projects would potentially add noise sources that would increase local noise levels. Because the region is already developed with numerous noise sources—including freeways, roads, railroads airports, and onsite operations—the additional noise from any one project would typically be incremental relative to existing conditions. Because noise and vibration attenuate quite rapidly with distance from the source, the effects from an individual project are quite localized to the project site or the facility (roadway, railroad, etc.) affected. In general, all cumulative projects will be subject to some combination of Federal, State, and local guidelines that will help to control individual noise levels. Nonetheless, past and present development has increased, and probable future development will increase, the number of people working and/or living in the proposed PMPU area and adjacent cities, which will tend to increase

overall noise levels over time. At some sensitive land uses in the proposed PMPU vicinity, the overall noise or vibration levels currently do, or will in the future, exceed standards or guidelines established in local noise ordinances or general plan noise elements, or other applicable standards. As a result, cumulative effects related to noise and vibration would be cumulatively significant at some locations in the vicinity of the proposed PMPU area.

4.10.7.3 Project Contribution

Construction Noise

The timing, location, and duration of construction activities associated with future development allowed under the proposed PMPU is not known at this time. However, as discussed above under Threshold 1, future projects constructed under the proposed PMPU, with or without Options 1, 2, or 3, may generate substantial noise levels as a result of pile driving and other heavy construction activities. These noise levels would likely exceed applicable noise standards at some sensitive land uses surrounding the Port. It is also possible that one or more cumulative projects could involve construction activities that would occur during prohibited hours (evening, nighttime, Sundays, or holidays), which may generate noise in excess of local limits for stationary noise sources at existing noise-sensitive receptors. If this construction were to occur simultaneously and in proximity to PMPU-related construction projects, cumulative noise levels may be exacerbated at nearby sensitive receptors. As such, implementation of the proposed PMPU, with or without Options 1, 2, or 3, would result in a cumulatively considerable contribution to significant construction noise impacts (**Impact-C-NOI-1** and **Impact-C-NOI-2**). Mitigation measures **MM-NOI-1** through **MM-NOI-5** would reduce construction-related noise levels to the extent possible, but the impact would likely remain significant and unavoidable at some locations. If construction noise from the proposed PMPU were to affect receivers exposed to construction noise from related projects, there would be the potential to exacerbate noise levels and contribute to overall levels in excess of applicable standards. This scenario would arise if two or more construction projects occur close to the same noise-sensitive receptor(s) simultaneously. This scenario cannot be ruled out and could occur over the life of the proposed PMPU. Therefore, implementation of the proposed PMPU, with or without Options 1, 2, or 3, would result in a cumulatively considerable and unavoidable contribution to construction noise levels after mitigation.

Traffic Noise

The traffic analysis presented under Threshold 1 above includes future growth under the proposed PMPU. The results indicate significant traffic noise impacts could occur at several locations depending on the pace of buildout and the details of the individual projects implemented under the proposed PMPU, with or without Options 1, 2, or 3. The impacted land uses would all be adjacent to roadways experiencing traffic growth related to the proposed PMPU. This growth, and the resulting traffic noise increase could be exacerbated by additional traffic from cumulative development. Therefore, implementation of the proposed PMPU, with or without Options 1, 2, or 3, would result in a cumulatively considerable contribution to traffic noise levels (**Impact-C-NOI-3**). Mitigation measures **MM-NOI-6** and **MM-NOI-7** would reduce traffic noise levels to the extent possible, but impacts may remain significant and unavoidable at some locations.

Onsite Stationary Noise Sources

Future development under the proposed PMPU may generate substantial noise levels as a result of onsite operational activities. These noise levels may exceed applicable noise standards at some sensitive land uses surrounding the proposed PMPU area. If operational noise from PMPU, with or without Options 1, 2, or 3, were to affect receivers exposed to noise from related projects, there would be the potential to exacerbate noise levels and contribute to overall levels in excess of applicable standards. This scenario would arise if two or more projects occur close to the same noise-sensitive receptor(s). This scenario cannot be ruled out and could occur over the life of the proposed PMPU. Therefore, implementation of the proposed PMPU, with or without Options 1, 2, or 3, would result in a cumulatively considerable contribution to operational noise levels from stationary sources (**Impact-C-NOI-4**). Mitigation measures **MM-NOI-8** through **MM-NOI-11** would reduce noise levels to the extent possible, but the impact may remain significant and unavoidable at some locations.

Groundborne Vibration

The timing, location, and duration of construction activities associated with future development allowed under the proposed PMPU are not known at this time. However, above under Threshold 2, future projects constructed under the proposed PMPU, with or without Options 1, 2, or 3, may generate substantial groundborne vibration levels as a result of pile driving and other heavy construction activities. These vibration levels could exceed thresholds for potential building damage or human annoyance at nearby buildings. If groundborne vibration from future projects constructed under the proposed PMPU were to affect occupied sensitive building exposed to vibration from related projects, there would be the potential to exacerbate vibration levels in excess of established guideline criteria. This scenario would arise if two or more construction projects occur close to the same sensitive building(s) simultaneously. This scenario cannot be ruled out and could certainly occur over the life of the proposed PMPU. Therefore, implementation of the proposed PMPU, with or without Options 1, 2, or 3, would result in a cumulatively considerable contribution to building damage (**Impact-C-NOI-5**) or human annoyance (**Impact-C-NOI-6**) due to groundborne vibration from construction activities. Implementation of **MM-NOI-12** would reduce the potential for building damage (**Impact-C-NOI-5**) to a less-than-significant level. Implementation of **MM-NOI-13** would avoid or reduce human annoyance at nearby buildings (**Impact-C-NOI-6**) to the extent possible, but the impact would likely remain significant and unavoidable at some locations.

4.10.7.4 Cumulative Impact Determination and Mitigation

The proposed PMPU's incremental contribution to cumulative impacts related to construction, traffic, and stationary operational noise would be cumulatively considerable prior to mitigation. The potential cumulatively considerable impacts are as follows.

Impact-C-NOI-1: Exceed the Established 75 dBA L_{eq} Thresholds at Noise-Sensitive Receptors. Cumulative construction activities may exceed the established 75 dBA L_{eq} thresholds at noise-sensitive receptors during permissible construction hours.

Impact-C-NOI-2: Generate Noise in Excess of Local Limits. Cumulative construction activities occurring during prohibited hours (evening, nighttime, Sundays, or holidays) may generate noise in excess of local limits for stationary noise sources at existing noise-sensitive receptors.

Impact-C-NOI-3: Increase Noise Levels at Existing Noise-Sensitive Receptors by 3 dB CNEL or More. Cumulative traffic on some roadways could increase noise levels at existing noise-sensitive receptors by 3 dB CNEL or more to a level that is above the local standards or guidelines of the applicable member City.

Impact-C-NOI-4: Generate Noise at Sensitive Receptors in Excess of Local Limits. Cumulative operation of future developments may generate noise at sensitive receptors in excess of local limits for stationary noise sources.

Impact-C-NOI-5: Exceed Caltrans Guideline Criteria for Potential Building Damage. Cumulative groundborne vibration may exceed Caltrans guideline criteria for potential building damage during project construction.

Impact-C-NOI-6: Exceed Caltrans Guideline Criteria for Potential Human Annoyance at Sensitive Receptors. Cumulative groundborne vibration may exceed Caltrans guideline criteria for potential human annoyance at sensitive receptors during project construction.

Mitigation Measures

For **Impact-C-NOI-1**:

Implement **MM-NOI-1**, **MM-NOI-2**, **MM-NOI-3**, and **MM-NOI-4**, as described under Threshold 1 above.

For **Impact-C-NOI-2**:

Implement **MM-NOI-5**, as described under Threshold 1 above.

For **Impact-C-NOI-3**:

Implement **MM-NOI-6** and **MM-NOI-7**, as described under Threshold 1 above.

For **Impact-C-NOI-4**:

Implement **MM-NOI-8**, **MM-NOI-9**, **MM-NOI-10**, and **MM-NOI-11**, as described under Threshold 1 above.

For **Impact-C-NOI-5**:

Implement **MM-NOI-12**, as described under Threshold 2 above.

For **Impact-C-NOI-6**:

Implement **MM-NOI-13**, as described under Threshold 2 above.

Level of Significance After Mitigation

Implementation of **MM-NOI-1** through **MM-NOI-13** would reduce the remaining cumulative noise and vibration impacts to the extent feasible. However, the design and location of future development projects allowed under the proposed PMPU are unknown at this time, as are the details and timing of cumulative projects that may occur during the same time period. Therefore, it is not possible to quantify whether, and to what extent, the recommended mitigation measures would be feasible and effective at abating or reducing the impacts. As a result, the proposed PMPU's incremental

contribution to cumulative noise and vibration impacts (**Impact-C-NOI-1, Impact-C-NOI-2, Impact-C-NOI-3, Impact-C-NOI-4, and Impact-C-NOI-6**) would remain cumulatively considerable.

Implementation of **MM-NOI-12** would reduce **Impact-C-NOI-5** (the proposed PMPU's contribution to potential building damage due to groundborne vibration) to less than cumulatively considerable.

4.11.1 Overview

This section describes the existing population and employment conditions in the San Diego Unified Port District’s (District’s) jurisdiction and the broader San Diego County region, as well as related laws and regulations. Impacts related to population are considered significant if the proposed Port Master Plan Update (PMPU) would induce substantial unplanned population growth in an area, either directly or indirectly, and one or more significant physical impacts on the environment are attributed to the unplanned population growth. Other population and housing-related issues, including impacts related to displacement of people and existing housing, were analyzed in Section XIII of the Initial Study/Environmental Checklist (Appendix A) and were determined not to be significant. The analysis and conclusions regarding these impacts are included in Chapter 5, Section 5.4, *Effects Found Not to Be Significant*. It should be noted that the powers and authorized uses of District lands stated in the San Diego Unified Port District Act (Port Act) do not include residential development. No residential uses currently exist within the proposed PMPU area or are planned for within the proposed PMPU area, and the proposed PMPU would not displace substantial numbers of existing people or housing. Therefore, impacts associated with housing are not addressed in this Program Environmental Impact Report (PEIR).

As discussed in Section 4.11.4.4, *Project Impacts and Mitigation Measures*, impacts associated with unplanned population growth would be less than significant.

4.11.2 Existing Conditions

The following describes the existing and projected population and employment within the five member cities surrounding the proposed PMPU area: Chula Vista, Coronado, Imperial Beach, National City, and San Diego.

4.11.2.1 Population

The majority of the District’s jurisdiction falls within or adjacent to developed and highly urbanized areas within the cities of Chula Vista, Coronado, Imperial Beach, National City, and San Diego (such as downtown San Diego).

The San Diego Association of Governments (SANDAG), as the Metropolitan Planning Organization, is the principal land use and transportation-planning agency for the San Diego region, including the region’s 18 municipalities. As part of its planning efforts, SANDAG produces growth forecasts of population, housing, employment, income, and land use for the San Diego region. Based on SANDAG’s most recent data, the San Diego regional population is forecast to increase from approximately 3,316,187 persons in 2016 to 4,011,145 persons in 2050 (SANDAG 2019)—an increase of 21 percent. Table 4.11-1 provides a breakdown of existing and projected regional population, and population within the five member cities surrounding the proposed PMPU area.

Notably, the District, consistent with the Public Trust Doctrine and Port Act, does not have residential uses and; correspondingly, there is no residential population.

Table 4.11-1. Existing and Projected Population by Jurisdiction

Jurisdiction	2016 Population	2025 Population	2035 Population	2050 Population	Average Annual Growth Rate	Percent Change Between 2016 and 2050
Chula Vista	267,917	280,162	280,162	340,279	0.68%	27%
Coronado	24,543	24,634	24,634	24,945	0.05%	1.64%
Imperial Beach	27,510	30,406	33,284	34,129	0.71%	24.06%
National City	61,210	64,906	69,679	75,084	0.67%	22.67%
San Diego (City)	1,406,318	1,533,992	1,652,833	1,742,652	0.70%	24%
Total Population of PMPU Adjacent Cities	1,787,498	1,934,100	2,060,592	2,217,089	0.71%	24%
San Diego Region	3,316,187	3,545,073,	3,753,630	4,011,145	0.62%	21%

Source: SANDAG 2019.

4.11.2.2 Employment

The State of California Employment Development Department's (EDD) is responsible for State programs involving job service, unemployment insurance, State disability insurance, workforce investment, and labor market information. The Labor Market Information Division of EDD collects, analyzes, and publishes information about California's labor markets, including employment and unemployment data. According to the EDD's labor force data, in December 2019 the San Diego County area had 1,569,400 jobs, an available labor force of 1,614,200 persons, and an average annual unemployment rate of 3.2 percent (EDD 2020a). With the onset of COVID-19 and the associated stay-at-home orders issued in California, the unemployment rate in San Diego County increased from 3.3 percent in January 2020 to as high as 15.2 percent in May 2020. As of September 2020, the unemployment rate was approximately 9.0 percent, and was further reduced to 6.4 percent by May 2021 (EDD 2020b, 2021).

In addition, SANDAG produces employment forecasts for the San Diego region, including the region's 18 municipalities. Based on SANDAG's projections, employment in the San Diego region is forecast to increase from 1,714,741 employment opportunities in 2016 to 2,051,356 employment opportunities in 2050, which represents a 20 percent increase. SANDAG's *San Diego Forward: The Regional Plan* (Regional Plan) projects centers of employment will continue to expand through 2050. For example, according to the Regional Plan, downtown San Diego is projected to add 30,000 employment opportunities by 2050, and Chula Vista is projected to add approximately 50,000 employment opportunities by 2050 (SANDAG 2015). Table 4.11-2 provides a breakdown of existing (2016) and projected regional employment, as well as employment for the District's five adjacent

cities, which includes the proposed PMPU area (as indicated on the population and employment density maps in the Regional Plan).

Table 4.11-2. Existing and Projected Employment by Jurisdiction

Jurisdiction	2016 Employment (Jobs) ^{1,2}	2025 Employment (Jobs) ^{1,2}	2035 Employment (Jobs) ^{1,2}	2050 Employment (Jobs) ^{1,2}	Average Annual Growth Rate	Percent Change Between 2016 and 2050
Chula Vista	71,638	75,595	85,091	11,942	1.20%	41%
Coronado	27,548	27,822	28,514	29,362	0.19%	6.58%
Imperial Beach	4,916	5,045	5,357	5,777	0.52%	18%
National City	37,289	38,471	41,274	45,038	0.61%	21%
San Diego (City)	915,295	957,496	1,036,088	1,125,661	0.68%	23%
Total Employment of PMPU Adjacent Cities	1,056,686	1,104,429	1,196,324	1,306,780	0.70%	24%
San Diego Region	1,714,741	1,723,744,	1,870,403	2,051,356	0.58%	20%

Source: SANDAG 2019.

¹ Includes both military and civilian jobs, where applicable.

² Projections for civilian jobs based on developed employment acre (industrial, retail, office, schools, and half of mixed-use acres).

Employment opportunities in the proposed PMPU area include the hospitality, retail, commercial, and industrial sectors. Commercial recreation activities provide full- and part-time employment opportunities in construction, warehousing, trucking, custodial, and personal services, all of which contribute to the economic base of the region (District 2020). According to an economic impact study prepared for the District, total employment within the proposed PMPU area for 2017 was estimated at 37,000 jobs (District 2019). However, 2020/2021 employment within the proposed PMPU area is likely to be less than employment in 2017 due to COVID-19 conditions.

4.11.3 Laws, Regulations, Plans, and Policies

4.11.3.1 State

California Public Trust Doctrine

The Public Trust Doctrine is a common law doctrine that provides that public lands and waters are held by the State or its delegated trustee (e.g., the California State Lands Commission [CSLC]) for the benefit of all people. All tide and submerged lands, granted or ungranted, as well as navigable rivers, sloughs, etc., are subject to the Public Trust. In granting such lands to local municipalities, the courts

have explained that it is within the wisdom and power of the Legislature, acting within the scope of its duties as trustee, to determine whether Public Trust uses should be modified or extinguished.

The Public Trust Doctrine, as overseen by the CSLC, restricts the type of land uses allowed on public lands, including the District Tidelands. The Public Trust Doctrine limits the uses of sovereign lands to waterborne commerce, navigation, fisheries, open space, water-oriented recreation, ecological habitat protection, or other recognized Public Trust purposes. While Public Trust uses originally focused upon navigation, commerce, and fisheries, they have been interpreted to include a broad array of uses such as fishing, hunting, bathing, swimming, boating, anchoring, and general recreation. Trust lands may be devoted to purposes unrelated to the trust if such purposes are incidental to and accommodate trust uses. The public uses to which tidelands are subject are sufficiently flexible to encompass changing public needs, which include both maritime and terrestrial uses (including activities for the non-boating public). In administering the trust, the District is not burdened with an outmoded classification favoring one mode of utilization over another.

As such, no residential uses are present within the proposed PMPU area, as they are not considered a permitted use under the Public Trust Doctrine.

San Diego Unified Port District Act

The Port Act, Appendix 1 of the California Harbor and Navigation Code, was adopted in 1962. Through the Port Act, the State of California delegated its authority to the District to manage and control certain tidelands and submerged waters. Specifically, the District was established for the development, operation, maintenance, control, regulation, and management of the tidelands and lands underlying the inland navigable waters of San Diego Bay. The Port Act requires the District to exercise its land management authority and powers over (1) the tidelands and submerged lands granted to the District and (2) any other lands conveyed to the District by any city or the County of San Diego, or acquired by the District. The Port Act grants the District exclusive police power over property and development subject to its jurisdiction. A Port Master Plan (PMP) is also required by the Port Act that must specify the water and land uses within the District's jurisdiction.

California Coastal Act

The California Coastal Act (CCA) of 1976 (Public Resources Code, Section 30000 et seq.) was enacted by the Legislature as a comprehensive scheme to govern land use planning for the entire coastal zone of California. A combination of local land use planning procedures and enforcement to achieve maximum responsiveness to local conditions, accountability, and public accessibility, as well as continued State coastal planning and management through the CCC, is relied upon to ensure conformity with the provisions of the act (Section 30004 (a) and (b)). Chapter 8, Article 3 of the CCA establishes a framework for ports, including the Port of San Diego, to develop a PMP by which to designate water and land uses and issue individual coastal development permits within their jurisdictions. Individual PMPs require review and certification by the CCC, including any amendments to the certified PMP. The CCC must certify a PMP or PMP Amendment (PMPA) if it finds that the PMP or PMPA meets the requirements of, and is in conformity with, the CCA. Additionally, Chapter 3 of the CCA, *Coastal Resources Planning and Management Policies*, provides broad statewide policies for public access to the coast, recreation, marine environment, land resources, development, and sea-level rise.

4.11.3.2 Regional

San Diego Association of Government's San Diego Forward: The Regional Plan

SANDAG is the San Diego region's primary public planning, transportation and research agency. SANDAG provides the public forum for regional policy decisions about growth and planning. In 2015, SANDAG adopted the Regional Plan, which includes an implementation program for growth within the San Diego region through 2050. The Regional Plan is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system. Furthermore, the Regional Plan, including its Sustainable Communities Strategy (SCS), commits to reducing emissions from transportation sources to comply with Senate Bill 375, improving public health, and meeting the National Ambient Air Quality Standards. The SCS included in the Regional Plan envisions reducing greenhouse gas emissions through strategies such as focusing on housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, employing smart growth land use policies, investing in a transportation network, addressing the housing needs of all economic segments of the population, and implementing the Regional Plan through incentives and collaboration (SANDAG 2015).

4.11.4 Project Impact Analysis

4.11.4.1 Methodology

This section analyzes the potential environmental impacts associated with unplanned population growth that could occur under buildout of the proposed PMPU. The impact analysis considers whether buildout of the proposed PMPU would induce substantial unplanned population growth, primarily through the introduction of new businesses and/or provision of new jobs, that would consequently require the construction of new infrastructure (e.g., new roads, utilities) or other improvements within the proposed PMPU area not previously identified in applicable plans to accommodate growth.

Potential direct impacts are determined by applying employment density factors to the development assumptions to estimate the employment that could occur with implementation of the proposed PMPU, and determine whether these jobs would induce unplanned growth in the San Diego region. Potential indirect impacts would be determined by identifying whether the proposed water and land use development scenarios that could occur under the proposed PMPU would result in the extension of infrastructure into areas where none currently exists, and whether this extension would induce unplanned growth in the San Diego County region. The analysis determines if the physical construction of these new facilities would result in a significant impact on the environment and if mitigation is necessary to reduce significant impacts. As noted above, the Port Act prohibits residential development on District tidelands; therefore, no residential uses are proposed in the proposed PMPU.

4.11.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of impacts associated with population and housing

resulting from the proposed project. The determination of whether a population and housing impact would be significant is based on the professional judgment of the District as Lead Agency, all of which is based on the evidence in the administrative record.

Impacts are considered significant if the proposed project would result in any of the following.

1. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Population-related issues that were addressed in Section XIII of the Initial Study/Environmental Checklist (Appendix A) and determined to be less than significant include impacts associated with the displacement of substantial numbers of existing housing and people, necessitating the construction of replacement housing elsewhere. The analysis and conclusions regarding these impacts are summarized in Chapter 5.

4.11.4.3 Policies that May Avoid or Reduce Impacts

There are no proposed PMPU policies that would have the potential to reduce or avoid impacts associated with substantial unplanned population growth.

4.11.4.4 Project Impacts and Mitigation Measures

Threshold 1: Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact Analysis

Construction

The PMPU serves as a long-term planning blueprint for future development on District Tidelands. Approval of the plan would facilitate future development subject to the future proposed developments obtaining a Coastal Development Permit or exclusion. However, the plan would not extend roads or result in new development in previously undeveloped areas that could induce unplanned growth as the project area is already urbanized.

Construction activities would result from future development projects that are consistent with the proposed water and land use designations and abide by the goals, objectives, policies and development standards set forth in the proposed PMPU. As such, the PMPU would indirectly result in the need for additional temporary construction jobs as these future development projects are constructed over the approximately 30-year life of the plan. Specifically, buildout of the proposed PMPU would potentially include the construction of a variety of types of development, including, but not limited to, new hotels and lower cost accommodations, restaurants and entertainment venues, park space and promenades, retail, convention and meeting space, and other uses that either are

water dependent or help to enhance the waterfront experience. In addition, the proposed PMPU would potentially lead to improvements to existing facilities.

Although implementation of the proposed PMPU would increase the number of temporary construction jobs in the proposed PMPU area, the buildout of the proposed PMPU would take place over a 30-year timeframe and development is expected to occur throughout that timeframe. Consequently, the need for construction jobs would not occur all at once. In addition, construction workers account for approximately 4.3 percent of the total employment in San Diego County (approximately 66,000 employees) (BLS 2019), and the existing construction labor force would be sufficient to meet the future construction demands in the proposed PMPU area. Therefore, additional jobs would not increase the population because future employees are anticipated to be drawn from existing and future residents of the San Diego region, the population of which will also be growing alongside growth at the Port consistent with the population growth projections provided in SANDAG's Regional Plan. Therefore, construction indirectly associated with the proposed PMPU would have a less-than-significant impact on the inducement of unplanned population and employment growth.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, *Project Description*, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within Planning District (PD) 3, would result in a less-than-significant impact related to population and housing.

The construction of a new Waterfront Destination Park and closure of a segment of North Harbor Drive would not require a greater number of construction workers than what is analyzed for the proposed PMPU above. Therefore, construction under Option 1 would not result in any additional or more severe impacts related to population and housing than buildout of the proposed PMPU without Option 1. Impacts related to the inducement of unplanned population and employment growth would be less than significant.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than significant-impact related to population and housing.

Option 2 would involve the replacement of land designated for Commercial Recreation uses by Recreation Open Space area, differing from what is analyzed for the proposed PMPU above. This could result in a minor decrease in hotel rooms or retail/restaurant square footage, which may result in a slight decrease in construction worker employment from what is analyzed above. Therefore, construction under Option 2 would not result in any additional or more severe impacts related to population and housing than buildout of the proposed PMPU without Option

2. Impacts related to the inducement of unplanned population and employment growth would be less than significant.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to population and housing. This less-than-significant impact would still occur under Option 3.

Option 3 would involve the realignment of North Harbor Drive in a way that would result in a minor reduction in Commercial Recreation uses from what is analyzed for the proposed PMPU above. This would also result in a slight reduction in the need for construction workers related to development of Commercial Recreation uses from what is analyzed above. Therefore, construction under Option 3 would not result any additional or more severe impacts related to population and housing than buildout of the proposed PMPU without Option 3. Impacts related to the inducement of unplanned population and employment growth would be less than significant.

Operation

Future permanent employment opportunities in the proposed PMPU area would include jobs in the hospitality, retail, industrial, and commercial sectors, consistent with existing employment opportunities within the Port. Commercial recreation-oriented businesses provide full- and part-time employment opportunities in construction, warehousing, trucking, custodial, and personal services (District 2019). Industrial uses at the Port support cargo and goods movement, ship building and repair, and other similar maritime-related industries and businesses. Buildout of the proposed PMPU would result in the development of future visitor-serving uses throughout the proposed PMPU area, such as hotels, restaurants, and retail. Economic growth could occur as these new visitor-serving businesses are established or existing businesses expand, creating new sources of employment. While a majority of the planning districts would experience some level of growth and development, PD2 and PD3 would have the greatest development potential, and thus would have the potential to generate the greatest number of permanent employment opportunities.

Employment that could occur within the proposed PMPU area was estimated using standard employee density factors provided by regional or industry-specific sources. SANDAG identifies factors for retail and industrial employment in their Regional Transportation Congestion Improvement Plan (RTCIP) Impact Fee Nexus Study (SANDAG 2007). Hotel employment was estimated at 1.37 employees per room (Oxford Economics 2019).¹ According to the development assumptions provided in Chapter 3, landside development occurring under the proposed PMPU could add approximately 6,173 new hotel rooms, a total of 356,622 square feet of new restaurant and retail space (standalone retail and restaurant space would increase by 79,373 square feet, and restaurant and retail within hotels by 187,250), and 26,136 square feet of commercial fishing space. In addition, 524 new jobs would be added within PD4 with the Tenth Avenue Marine Terminal Redevelopment Plan. However, due to the existing built-out nature and physical constraints that restrict expansion opportunities for the shipyards, these uses are not expected to experience growth and employment increases under the proposed PMPU and would remain at a constant existing

¹ An economic analysis conducted for the American Hotel & Lodging Association concluded that an average hotel with 100 occupied rooms supports 137 direct jobs.

employment of approximately 7,900 employees based on data from the U.S. Bureau of Labor Statistics (2018).² Based on the potential growth identified above, Table 4.11-3 shows the potential increase in employment that could occur under implementation of the proposed PMPU.

Table 4.11-3. Estimated Baywide Employment with Implementation of the Proposed PMPU

Land Use	Proposed New Square Feet/Rooms	Employment Density Factor^{1,2}	New Employment
Total New Hotel Rooms	6,173	1.37 employees/room	8,457
Total Retail/Restaurant (square feet)	356,622	500 square feet/employee	713
Tenth Avenue Marine Terminal	NA	NA	524 ³
Commercial Fishing (landside square feet)	26,136	900 square feet/employee	29 ⁴
Total Employment			9,723

Sources: SANDAG 2007, Oxford Economics 2019.

¹ Hotel employment was estimated using a factor of 1.37 employees per room based on an average hotel producing 137 direct jobs for every 100 occupied rooms (Oxford Economics 2019).

² Retail employment was estimated using a density factor of 500 sf/employee (SANDAG 2007).

³ Employment for PD4 was taken from the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component Final Environmental Impact Report (District 2016).

⁴ Commercial fishing employment was estimated using the employment density factor for industrial uses of 900 sf/employee (SANDAG 2007).

As shown in Table 4.11-3, employment within the proposed PMPU area is estimated to increase by 9,723 jobs by buildout of the proposed PMPU (2050), which would be a 26 percent increase in jobs in the area. As identified in Section 4.11.2.2, *Employment*, SANDAG anticipates employment in the San Diego region to increase to 2,051,356 jobs by 2050, or an increase of 336,615 jobs over existing conditions. The 9,723 new jobs created by the proposed PMPU would account for approximately 2.8 percent of the projected employment growth, which would be well within the planned growth for the region. Given that many of these jobs would involve retail or hotel positions and that San Diego County had an average annual unemployment rate of 3.3 percent prior to the effects of COVID-19 (approximately 61,165 unemployed individuals),³ future employees are anticipated to be drawn from existing and future residents of the San Diego region. As such, the proposed PMPU would not result in substantial unplanned population growth due to the introduction of new employees into the region and would not result in any indirect effects, such as demand for new housing, that would result from unplanned population growth. In addition, the proposed PMPU would primarily involve future infill development within areas that are already developed and would not involve the extension of new roadways or other new infrastructure into currently undeveloped areas. Therefore, because the increased employment would be well within anticipated growth and could be filled by the existing or projected population, the proposed PMPU would not induce substantial unplanned population growth, either directly by proposing new homes and businesses or indirectly

² Employment estimates for PD5 and PD6 are not included because they are not being updated as part of the PMPU. Employment estimates for PD7 are not included because there are no development projections for this planning district.

³ As discussed in Section 4.11.2.2, the unemployment rate in San Diego County increased from 3.3% in January 2020 to as high as 15.2% in May 2020 due to the onset of COVID-19 and associated stay-at-home orders. As of September 2020, the unemployment rate was approximately 9.0%, and was further reduced to 6.4% by May 2021.

through the extension of infrastructure into areas where none currently exists. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to population and housing.

Operational activities under Option 1 would consist of routine maintenance and upkeep of the Waterfront Destination Park, similar to other existing parks on District Tidelands, which would require permanent employees to maintain the park. However, this would not require a greater number of permanent workers than what is analyzed above. None of the other components of Option 1, including the closure of North Harbor Drive from the prolongation of West G Street to Broadway and the corresponding removal of parking, would require permanent employees once these improvements are complete. Operation of these uses would not affect the potential employment shown in Table 4.11-3. Therefore, operations under Option 1 would not result in any additional or more severe impacts related to population and housing than buildout of the proposed PMPU without Option 1.

In addition, while Option 1 would increase the amount of Commercial Recreation space by about 1.5 acres, this would not result in a substantial increase in employees compared to those estimated for the proposed PMPU. Impacts would be less than significant.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to population and housing.

Operational activities under Option 2 would consist of routine maintenance and upkeep of the expanded Lane Field Setback Park, similar to other existing parks on District Tidelands, which would require permanent employees to maintain the park. However, Option 2 would involve the replacement of land designated for Commercial Recreation uses to Recreation Open Space area. This could result in a minor decrease in hotel rooms or retail/restaurant area, which would result in a slight decrease in permanent employment associated with Commercial Recreation uses shown in Table 4.11-3. Therefore, operation of Option 2 would not result in any additional or more severe impacts related to population and housing than buildout of the proposed PMPU without Option 2. Impacts would be less than significant.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to population and housing.

Operational activities under Option 3 would consist of routine maintenance and upkeep of the additional park space added under this option, similar to other existing parks on District Tidelands, which would require permanent employees to maintain the park. However, Option 3 would involve the realignment of North Harbor Drive in a way that would result in a minor reduction in Commercial Recreation uses. This would also result in a slight reduction in permanent employment related to Commercial Recreation uses shown in Table 4.11-3. Therefore, operation of Option 3 would not result any additional or more severe impacts related to population and housing than buildout of the proposed PMPU without Option 3. Impacts would be less than significant.

Impacts of Proposed PMPU Element Policies

There are no proposed PMPU Element policies that would result in impacts related to substantial unplanned population growth.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). Impacts would be less than significant.

4.11.5 Cumulative Impact Analysis

4.11.5.1 Geographic Scope

The geographic scope for cumulative impacts associated with population and housing is the San Diego County region. Factors that influence regional population and housing growth include, but are not limited to, large-scale land use changes (e.g., General Plan and Community Plan Updates); the effectiveness of the transportation system; and the availability of jobs, housing, and infrastructure.

4.11.5.2 Cumulative Effects

The determination of cumulative effects relies on both regional forecasted growth as well as regionally significant plans and programs. The projection approach is applicable as growth, land use change, and development across the region can substantially affect and modify population and employment by supporting and facilitating the generation of jobs and population on a regional scale. In the San Diego region, SANDAG serves as the regional transportation planning agency responsible for forecasting the region's population growth. The Series 14 Regional Growth Forecast, the most current growth forecast model in use at the time of this analysis, represents a combination of economic and demographic projections, existing land use plans and policies, and potential land use plan changes that may occur in the region between 2025 and 2050. According to the Series 14 Regional Growth Forecast, SANDAG projects the region's population will grow by approximately 437,443 people by 2035 and nearly 694,958 people by 2050 (SANDAG 2019). In addition to regional forecasted growth, Table 2-2 in Chapter 2, *Environmental Setting*, of this PEIR identifies additional regionally significant plans and programs that have been adopted, or are currently in the planning phase, since adoption of the Series 13 Regional Growth Forecast.

The past, present, and reasonably foreseeable future plans and programs identified in Table 2-2 primarily include community plan or general plan updates. While these plans were adopted after the most recently conducted growth and employment forecasts, as noted above, land use changes included in these plans are intended to accommodate the population and employment growth projected by SANDAG. The Chula Vista Bayfront Master Plan would introduce residential and commercial uses, which would increase population and employment within the master plan area, but again, as noted in the environmental impact report for the Chula Vista Bayfront Master Plan, these uses are also considered to be growth accommodating (District 2008). In addition, the National City Bayfront Projects and Plan Amendments would increase lodging opportunities and commercial space. It is unlikely the new employees generated by these uses within that project's 75-acre area would exceed the projected employment growth for the region. Similar to the proposed PMPU, additional jobs would not increase the population because future employees are anticipated to be drawn from existing and future residents of the San Diego region.

Therefore, past, present, and reasonably foreseeable future plans and programs would not result in substantial unplanned population growth, and cumulative effects associated with unplanned population and employment growth would be less than cumulatively significant.

4.11.5.3 Project Contribution

The PMPU would facilitate the construction of future visitor-serving uses within the proposed PMPU area, such as new hotels and lower cost accommodations, restaurants and entertainment venues, park space and promenades, retail, convention and meeting space, office space, and other uses. As discussed in Section 4.11.4.4 above, the proposed PMPU would indirectly result in additional temporary construction jobs as these future development projects are constructed over the approximately 30-year life of the proposed PMPU. As discussed above, it is anticipated that construction-related additional jobs would not increase the population because future employees are anticipated to be drawn from existing and future residents of the San Diego region. Consequently, a cumulatively significant impact related to construction from past, present, and probable future projects is not present.

Additionally, economic growth could also occur as new visitor-serving businesses are established or existing businesses expand, creating new sources of permanent employment; and buildout and operation of allowable water and land uses, including secondary uses over the next 30 years would generate new permanent employment opportunities. However, as demonstrated in Section 4.11.4.4, this employment would fall well within the planned projections for population and employment growth within the region and would not induce substantial unplanned growth. Therefore, the number of permanent jobs generated by buildout of the proposed PMPU, when combined with the number of permanent jobs generated by buildout of the past, present, and reasonably foreseeable future plans and programs identified in Table 2-2, would not have the potential to indirectly induce substantial unplanned population growth within the San Diego region. Therefore, the proposed PMPU would not result in a cumulatively considerable impact related to cumulative unplanned population growth.

4.11.5.4 Cumulative Impact Determination and Mitigation

The PMPU's incremental contribution to cumulative population and housing impacts would not be cumulatively considerable. Cumulative impacts would be less than significant.

Section 4.12
Public Services and Recreation

4.12.1 Overview

This section describes the existing public services and recreational facilities that could be affected by the proposed Port Master Plan Update (PMPU) and the laws and regulations related to public services and recreational facilities, and concludes with an analysis of the proposed PMPU’s potential to require or result in new or expanded facilities for: (1) fire protection and emergency medical response, (2) police protection, (3) schools, and (4) parks and other recreation, as well as discussion of whether construction of such facilities would result in significant environmental impacts.

Table 4.12-1 summarizes the significant impacts and mitigation measures (MMs) discussed in Section 4.12.4, *Project Impact Analysis*.

Table 4.12-1. Summary of Significant Public Services and Recreation Impacts and Mitigation Measures

Summary of Potentially Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-PS-1: Potential to Result in Substantial Adverse Physical Impacts from the Provision of New or Physically Altered Police Protection Facilities Associated with Operation of Future Development Projects Consistent with the Proposed PMPU.	PD1–PD4	MM-PS-1: Conduct Project-Specific Reviews of the Adequacy of Police Protection Services with the SDPD and Coast Guard to Determine if a New or Expanded Government Facility Will be Required.	Significant and Unavoidable	MM-PS-1 would not ensure that the impact would be less than significant because the specific location and design specifications for future expansion or construction of new police facilities are not known at this time.
Impact-PS-2: Potential to Result in Substantial Adverse Physical Impacts from the Construction of New or Physically Altered Parks Implemented	PD1–PD4	Implement MM-AQ-2 through MM-AQ-8 , as described in Section 4.2, <i>Air Quality and Health Risk</i> ; implement MM-BIO-2 , MM-BIO-5 , MM-BIO-8 , and MM-BIO-9 , as described in Section 4.3, <i>Biological Resources</i> ; implement	Significant and Unavoidable	For the reasons discussed in Sections 4.2, 4.4, and 4.10, construction impacts related to air quality, cultural resources, and noise would remain significant and unavoidable even after implementation of mitigation.

Summary of Potentially Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Under the Proposed PMPU.		<p>MM-CUL-1 through MM-CUL-3, as described in Section 4.4, <i>Cultural Resources and Tribal Cultural Resources</i>; implement MM-GEO-1, as described in Section 4.5, <i>Geology and Soils</i>; implement MM-GHG-2, as described in Section 4.6, <i>Greenhouse Gas Emissions</i>; implement MM-NOI-1 through MM-NOI-5, as described in Section 4.10, <i>Noise and Vibration</i>; and MM-HAZ-1 and MM-HAZ-2, as described in Section 4.7, <i>Hazards and Hazardous Materials</i>.</p>		
<p>Impact-PS-3: Potential to Result in Substantial Adverse Physical Impacts from the Operation of New or Physically Altered Parks Implemented Under the Proposed PMPU.</p>	PD1–PD4	<p>Implement MM-AQ-9, through MM-AQ-12, as described in Section 4.2, <i>Air Quality and Health Risk</i>; implement MM-BIO-5, as described in Section 4.3, <i>Biological Resources</i>; and implement MM-GHG-1 and MM-GHG-2, as described in Section 4.6, <i>Greenhouse Gas Emissions</i>.</p>	Significant and Unavoidable	<p>For the reasons discussed in Section 4.2, operational air quality impacts would remain significant and unavoidable even after implementation of mitigation.</p>
<p>Impact-REC-1: Potential to Result in Substantial Adverse Physical Impacts from the Construction of New or Expanded Recreational Facilities Implemented</p>	PD1–PD4	<p>Implement MM-AQ-2 through MM-AQ-8, as described in Section 4.2, <i>Air Quality and Health Risk</i>; implement MM-BIO-2, MM-BIO-5, MM-BIO-8, and MM-BIO-9, as described in Section 4.3, <i>Biological</i></p>	Significant and Unavoidable	<p>For the reasons discussed in Sections 4.2, 4.4, 4.8, and 4.10, construction impacts related to air quality, cultural resources, water quality, and noise would remain significant and unavoidable even after</p>

Summary of Potentially Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Under the Proposed PMPU.		<i>Resources</i> ; implement MM-CUL-1 through MM-CUL-3 , as described in Section 4.4, <i>Cultural Resources and Tribal Cultural Resources</i> ; implement MM-GHG-2 , as described in Section 4.6, <i>Greenhouse Gas Emissions</i> , implement MM-HAZ-1 and MM-HAZ-2 , as described in Section 4.7, <i>Hazards and Hazardous Materials</i> ; implement MM-NOI-1 through MM-NOI-5 , as described in Section 4.10, <i>Noise and Vibration</i> ; and implement MM-WQ-1 through MM-WQ-7 , as described in Section 4.8, <i>Hydrology and Water Quality</i> .		implementation of mitigation.
Impact-REC-2: Potential to Result in Substantial Adverse Physical Impacts from the Operation of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU.	PD1–PD4	Implement MM-AQ-9 , through MM-AQ-12 , as described in Section 4.2, <i>Air Quality and Health Risk</i> ; implement MM-BIO-5 as described in Section 4.3, <i>Biological Resources</i> ; implement MM-GHG-1 and MM-GHG-2 , as described in Section 4.6, <i>Greenhouse Gas Emissions</i> , and implement MM-WQ-8 , as described in Section 4.8, <i>Hydrology and Water Quality</i> .	Significant and Unavoidable	For the reasons discussed in Sections 4.2 and 4.8, operational impacts related to air quality and water quality would remain significant and unavoidable.
Impact-C-PS-1: Potential to Result in Cumulatively Considerable	PD1–PD4	Implement MM-PS-1 , as described above.	Significant and Unavoidable	MM-PS-1 would not ensure that this impact would be less than significant because the

Summary of Potentially Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Substantial Adverse Physical Impacts from the Provision of New or Physically Altered Police Protection Facilities.				specific location and design specifications for future expansion or construction of new police facilities are not known at this time.
Impact-C-PS-2: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Construction of New or Physically Altered Parks Implemented Under the Proposed PMPU.	PD1–PD4	Implement MM-AQ-2 through MM-AQ-8 , MM-BIO-2 , MM-BIO-5 , MM-BIO-8 , and MM-BIO-9 , MM-CUL-1 through MM-CUL-3 , MM-GHG-2 , MM-NOI-1 through MM-NOI-5 , and MM-HAZ-1 and MM-HAZ-2 , as described above.	Significant and Unavoidable	For the reasons discussed in Sections 4.2, 4.4, and 4.10, construction impacts related to air quality, cultural resources, and noise would remain significant and unavoidable even after implementation of mitigation.
Impact-C-PS-3: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Operation of New or Physically Altered Parks Implemented Under the Proposed PMPU.	PD1–PD4	Implement MM-AQ-9 through MM-AQ-12 , MM-BIO-5 , MM-GHG-1 and MM-GHG-2 , as described above.	Significant and Unavoidable	For the reasons discussed in Section 4.2, operational air quality impacts would remain significant and unavoidable even after implementation of mitigation.
Impact-C-REC-1: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Construction of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU	PD1–PD4	Implement MM-AQ-2 through MM-AQ-8 , MM-BIO-2 , MM-BIO-5 , MM-BIO-8 , and MM-BIO-9 , MM-CUL-1 through MM-CUL-3 , MM-GHG-2 , MM-HAZ-1 and MM-HAZ-2 , MM-NOI-1 through MM-NOI-5 , and MM-WQ-1 through MM-WQ-7 , as described above.	Significant and Unavoidable	For the reasons discussed in Sections 4.2, 4.4, 4.8, and 4.10, construction impacts related to air quality, cultural resources, water quality, and noise would remain significant and unavoidable even after implementation of mitigation.

Summary of Potentially Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-C-REC-2: Potential to Result in a Cumulatively Considerable Substantial Adverse Physical Impacts from the Operation of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU	PD1–PD4	Implement MM-AQ-9 through MM-AQ-12 , MM-BIO-5 , MM-GHG-1 and MM-GHG-2 , and MM-WQ-8 , as described above.	Significant and Unavoidable	For the reasons discussed in Sections 4.2 and 4.8, operational impacts related to air quality and water quality would remain significant and unavoidable.

4.12.2 Existing Conditions

The following describes the agencies that provide, police, fire, and other public services for the water and land uses within the San Diego Unified Port District’s (District’s) jurisdiction.

4.12.2.1 Fire Protection and Emergency Response

The District does not operate its own fire department. Rather, it participates in standing Mutual Service Agreements with the fire departments of the adjacent cities to respond to landside fire-related emergencies. In addition, the San Diego Harbor Police Department (HPD) cross-trains all officers as marine firefighters so it can respond to any fire-related call in San Diego Bay, including marinas, anchorages, moorings, shipyards, and cargo and cruise ship terminals. The agencies that provide fire protection and emergency response services to the proposed PMPU area are described below.

San Diego Harbor Police Department (Marine Firefighting and Emergency Response)

The San Diego HPD provides law enforcement services to the District, as well as marine firefighting services in the San Diego Bay area for the District. The HPD jurisdiction includes the San Diego Bay, San Diego International Airport, and the tidelands within the five neighboring cities: Chula Vista, Coronado, Imperial Beach, National City, and San Diego. The HPD’s 140 sworn officers provide law enforcement, marine firefighting, and emergency response services (District 2021a).

All HPD officers are cross-trained in marine firefighting. HPD vessels are equipped with firefighting equipment so as to quickly respond to a fire emergency on or adjacent to the Bay, as well as inner and outer coastal waters. In addition, under a mutual aid agreement, HPD assists City of San Diego lifeguards in Mission Bay. The HPD fleet can also accommodate dive equipment in the case of a dive-rescue related incident that requires the HPD Dive Team. For further information about the landside

law enforcement duties of the HPD, see Section 4.12.2.2, *Police Protection*. HPD is composed of the following departments as they pertain to fire protection and emergency response.

- **Marine Firefighting:** Marine firefighter officers with HPD are unique because they are cross-trained as both land- and marine-based firefighters. The patrol boats also serve as firefighting boats that respond to fire emergencies in the Bay. Each officer is highly trained and fully equipped with firefighting equipment, and each boat includes a water cannon capable of shooting a stream of water several hundred feet. The fireboats can handle small electrical fires or a large vessel engulfed in flame by containing the fire, knocking it down, rescuing trapped victims, and protecting adjacent vessels in a marina. The fireboats can be cooperatively used with the City of San Diego's Fire-Rescue Department (SDFD) if necessary, and SDFD takes control of fire protection service upon arrival at the scene.
- **Vessel Patrol:** HPD vessels patrol San Diego Bay, its associated waterways, and coastal areas, similar to the way HPD patrols on land. These vessels are staffed 24 hours a day, in all types of weather. Their primary function is the ability to respond to all types of law enforcement-related issues. Additionally, part of the fleet is designed for response to any fire and rescue-related calls. All of HPD's vessels can also accommodate the Dive Rescue Team and the different missions they handle (District 2021a). HPD provides two 35-foot patrol boats crewed by two officers with the primary objective of enforcing the rules of the water as they pertain to private watercraft. A third boat is available for peak events in San Diego Bay.

City of San Diego Fire-Rescue Department

The SDFD provides fire protection, emergency medical, lifeguard, and emergency management services. The jurisdiction of the SDFD covers 343 square miles, including 17 miles of coastline extending 3 miles offshore, and serves approximately 1,420,571 citizens (SANDAG 2020). Structures that are attached to land, such as docks, are also under the jurisdiction of SDFD, even though the structures are located over water. However, SDFD and HPD provide joint-response to fire incidents at docks and on the water. The SDFD has 51 fire stations, as well as an airport station, an Emergency Command and Data Center, and a Fire-Rescue Logistics Center; and employs 892 uniformed fire personnel. The SDFD also includes 9 permanent lifeguard stations, 31 seasonal stations, and 98 permanent uniformed lifeguard personnel. The SDFD employs 246 civilian personnel, for a total of 1,236 total employees (SDFD 2021a). Per the Public Facilities, Services, and Safety Element of the City of San Diego General Plan, SDFD has established a response time goal of 7.5 minutes from receipt of call to arrival of first-due unit for small fires and medical patients. For serious emergencies requiring multiple unit response, the response time goal is 10.5 minutes from time of call to arrival of an effective firefighting force (City of San Diego 2018).

An existing area of concern for SDFD is the lack of significant water-based firefighting resources, such as fire boats. As such, large fires on the water are currently difficult to address (Webber pers. comm.). SDFD and HPD provide mutual assistance for incidents in San Diego Bay, including fires at boat docks as well as out on the water. On the ground, SDFD has adequate resources to cover landside firefighting needs. However, one other area of concern is the volume of Emergency Medical Services (EMS) responses in the Downtown area. SDFD currently has the proper equipment to respond to these types of calls in the Downtown area, but will likely need to add additional staff to cover the increased call volumes from population growth in the area in order to maintain adequate response times (Webber pers. comm.). In addition, SDFD and the District have a Municipal Services

Agreement for providing fire and emergency services on District property. These agreements are reevaluated every 5 years, at which time service needs are also reassessed (Webber pers. comm.).

In 2020, an *All-Risk Maritime Response Capabilities Assessment* was commissioned by SDFD, in cooperation with the District, to assess the current maritime fire and emergency medical risks to be protected in San Diego Bay. This report identified a series of gaps in the marine emergency response system that currently exists in the District's operational area and found that the HPD firefighting program is very capable, but only equipped and trained for pleasure craft fires and moderately sized emergency medical events. The HPD can handle moderate emergencies on party and event vessels but not on large tourism attraction or commercial vessels (Citygate Associates 2020).

The SDFD uses a variety of apparatus to serve the City of San Diego. The fire stations are all generally equipped with fire engines, paramedic units, fire trucks, brush engines, battalion chief's vehicles, and/or water tenders. The SDFD could also utilize a fast response squad (FRS), reserve fire engine, urban search and rescue (US&R) rig, and/or an aerial truck to respond to fire and other emergency situations. The SDFD fire stations that would provide fire protection and emergency services in PD1, PD2, PD3, and PD4 are described in Table 4.12-2.

Table 4.12-2. SDFD Fire Stations Serving PMPU Planning Districts

Fire Station Number	Address	Types of Equipment	Size of Service Area	Planning District Served
Fire Station 22	1055 Catalina Boulevard	1 Engine	5.97 square miles	PD1
Airport Station	3698 Pacific Highway	4 aircraft crash and rescue trucks	San Diego International Airport	PD2
Fire Station 1	1222 1 st Avenue	1 battalion 2 engines 1 truck 1 light and air unit 1 chemical rig 1 medic unit 1 mobile canteen 1 x-ray unit	Engine 1 covers 0.78 square miles and Engine 201 covers 0.54 square miles	PD3
Fire Station 2	875 W. Cedar Street	1 engine, 1 urban search and rescue unit, 1 utility rig	Little Italy and Downtown west of the train and trolley tracks	PD3
Fire Station 3	725 West Kalmia Street	1 engine	2.24 square miles	PD2 and PD3
Fire Station 4	404 8 th Avenue	1 engine	0.66 square miles	PD3
Fire Station 7	944 Cesar E. Chavez Parkway	1 engine	1.71 square miles	PD4

Source: SDFD 2021b.

City of Coronado Fire Department

The Coronado Fire Department and Lifeguard Services (CFD) provide fire protection, emergency medical services, and lifeguard services. CFD deploys a fire engine with a team of firefighters and paramedics on board as responders. Daily staffing includes 1 engine company, 1 truck company, one paramedic ambulance, and a duty battalion chief, for a total of 10 personnel operating 24/7. CFD also responds to medical incidents on boat docks/slips and responds jointly with HPD for fire incidents on boat docks/slips (Peake pers. comm.). CFD has 30 fire suppression personnel staffing two fire stations around the clock. One fire station is located at 1001 6th Street, and the Coronado Cays Station is located at 101 Grand Caribe Causeway. The CFD also employs 7 permanent lifeguards, 2 administrative staff, and 1 Emergency Management Coordinator (City of Coronado 2020). In addition to the District, the CFD has mutual aid agreements with other governmental agencies such as the Navy, SDFD, and the City of Imperial Beach. The CFD also relies heavily on District (HPD) assistance for fighting fires in the Bay (City of Coronado 2005). The CFD would respond to emergency situations within PD9 and PD10.

City of Imperial Beach Fire-Rescue Department

PD8 would be served by the Imperial Beach Fire-Rescue Department (IBFRD), which has one fire station located at 865 Imperial Beach Boulevard, staffed with 12 suppression personnel, 1 Administrative Assistant, 1 Assistant Fire Marshal, and 1 Fire Chief. The City of Imperial Beach contracts with the City of Chula Vista for emergency medical transportation (French pers. comm.). There were approximately 27,448 citizens within Imperial Beach in 2019 (SANDAG 2020). The IBFRD aims to respond to 90 percent of ambulance calls within 12 minutes, has a fire response goal of 8 minutes for 90 percent of fire protection calls, and is currently meeting its response time goals (French pers. comm.). The IBFRD has identified the Imperial Beach Pier and associated water pipes as an existing area of concern. Currently, the Imperial Beach Pier will not support the weight of a fire engine and existing water pressure is not sufficient for firefighting (French pers. comm.).

4.12.2.2 Police Protection

San Diego Harbor Police Department

The HPD, as described above in Section 4.12.2.1, provides police protection, investigation, and marine fire-fighting services to the District in the Bay, surrounding Tidelands, and at the San Diego International Airport. The HPD's jurisdiction includes areas within five neighboring cities: Coronado, Chula Vista, Imperial Beach, National City, and San Diego. The HPD would serve all of the planning districts. The HPD headquarters is located at 3380 N. Harbor Drive, San Diego. There are three substations within the proposed PMPU area: the Shelter Island Station located at 1401 Shelter Island Drive, San Diego; the South Bay Station located at 950 Marina Way, Chula Vista; and the San Diego International Airport, located at 3225 North Harbor Drive, Terminal 1.

The HPD has a fleet of vessels that patrol the Bay, inner and outer coastal waters, and Mission Bay as part of an aid agreement with the City of San Diego Police Department. The HPD also has a fleet of vehicles that patrol the District Tidelands to provide safety and assistance to the Port tenants and visitors. In addition to these services, the HPD includes a Vessel Collision Team, Traffic Enforcement Team, Bike Team, Vehicle Patrol, Airport Law Enforcement, Explosives Detection Canine Team, and Narcotic Detection Canine Team. There are also a number of specialized units and task forces

designed to address specific needs, such as terrorism, narcotics and money smuggling, immigration and customs, and civil disobedience. The HPD works in conjunction with Federal agencies such as the U.S. Coast Guard, U.S. Customs and Border Protection, Homeland Security, and the Federal Bureau of Investigations for the operation of many of these task forces (District 2021a).

City of San Diego Police Department

The City of San Diego Police Department (SDPD) is divided into nine divisions. Planning District 1 and PD2 are within the Western Division, PD3 and PD4 are within the Central Division, and PD7 is within the Southern Division. Western Division Headquarters are at 5215 Gaines Street, Central Division Headquarters are at 2501 Imperial Avenue, and Southern Division Headquarters are at 1120 27th Street. The Western Division serves the neighborhoods of Hillcrest, La Playa, Linda Vista, Loma Portal, Midtown, Midway District, Mission Hills, Valley West, Morena, Ocean Beach, Old Town, Point Loma Heights, Roseville-Fletridge, Sunset Cliffs, University Heights, and Wooded Area, which encompasses a total of 22.7 square miles. The population of the Western Division is approximately 129,709 people (City of San Diego 2021a). Central Division encompasses the neighborhoods of Balboa Park, Barrio Logan, Core-Columbia, Cortez, East Village, Gaslamp, Golden Hill, Grant Hill, Harborview, Horton Plaza, Little Italy, Logan Heights, Marina, Park West, Petco, Sherman Heights, South Park, and Stockton, which covers 9.7 square miles. The Central Division serves a population of approximately 103,524 people (City of San Diego 2021b). The Southern Division serves a 31.5-square-mile area including the neighborhoods of Border, Egger Highlands, Nestor, Ocean Crest, Otay Mesa, Otay Mesa West, Palm City San Ysidro, and Tijuana River Valley. The population of the Southern Division is approximately 107,631 people (City of San Diego 2021c). Per the Public Facilities, Services, and Safety Element of the City of San Diego General Plan, SDPD has established the following response time goals:

- Priority E Calls (imminent threat to life) within 7 minutes.
- Priority 1 Calls (serious crimes in progress) within 12 minutes.
- Priority 2 Calls (less serious crimes with no threat to life) within 30 minutes.
- Priority 3 Calls (minor crimes/requests that are not urgent) within 90 minutes.
- Priority 4 Calls (minor requests for police service) within 90 minutes.

City of Coronado Police Department

The City of Coronado Police Department (CPD) would respond to criminal or emergency situations in PD9 and PD10. The CPD employs 67 paid employees and 40 civilian volunteers (City of Coronado 2021a). The CPD provides public safety and law enforcement services to a population of approximately 24,199 (as of 2019) on the island of Coronado (SANDAG 2020).

San Diego County Sheriff's Department – Imperial Beach Substation

The Imperial Beach Substation of the San Diego County Sheriff's Department, located at 845 Imperial Beach Boulevard, provides contract law enforcement services to the City of Imperial Beach and the unincorporated communities of Bonita, Chula Vista, Lincoln Acres, Proctor Valley, San Miguel, and Otay Valley. The division has approximately 40 sworn personnel assigned to the substation (SDCSD 2021). Imperial Beach has a population of approximately 27,448 residents and

covers about a 4-square-mile area (SANDAG 2020). Units operating out of the Imperial Beach Substation include the following:

- **Patrol Deputies:** Patrol deputies respond to calls for service 24 hours a day.
- **Traffic Deputies:** Traffic deputies handle vehicle code enforcement, traffic collision investigations, and traffic control within the City of Imperial Beach.
- **Detectives:** Detectives investigate cases involving theft, physical assaults (excluding homicides), sexual assaults, vandalism, burglaries, annoying phone calls, and other crimes. Specialized investigative units such as homicide, bomb/arson, financial crimes, domestic violence, child abuse, and narcotics handle specific crimes for the entire Sheriff's jurisdiction, including the Imperial Beach Station.
- **Crime Prevention Specialists:** Crime Prevention Specialists provide information and presentations about several topics, including, but not limited to residential and commercial security techniques, internet safety, identify theft protection, robbery prevention, and neighborhood watch.
- **Senior Volunteers:** The Senior Volunteer Patrol program provides assistance to existing staff by conducting home vacation security checks, visiting the homebound, enforcing handicapped parking regulations, assisting Crime Prevention Specialists with presentations, and conducting residential and businesses security checks.

U.S. Coast Guard

The 11th U.S. Coast Guard District covers more than 3.3 million square miles, including California, Arizona, Nevada, and Utah; the coastline; and over 1,000 miles of offshore waters (USCG 2021). Coast Guard Sector San Diego is at 2710 North Harbor Drive and responds to emergency calls related to hazardous materials and oil spills, homeland security issues, marine vehicle incidents, and search and rescue cases. The Coast Guard is responsible for operations from the Mexican border northward to above San Mateo Point, and offshore as far as 200 miles. Coast Guard Sector San Diego works with the HPD to respond to emergency situations in District Tidelands. Some Coast Guard Sector San Diego personnel are located in the Joint Harbor Operations Center (JHOC), along with Harbor Police and city law enforcement agencies for an integrated approach to protection of the Bay and bayfront. They also work side-by-side with the Navy, National Guard, and U.S. Customs/Border Protection to handle issues of homeland security.

4.12.2.3 Public Schools

There are no schools located within the proposed PMPU boundaries; however, there are four schools within 0.25 mile of the proposed PMPU area. Table 4.12-3 lists the school districts and schools within 0.25 mile of the planning districts. Note, PD5 and PD6 are not part of the proposed PMPU area and therefore schools within 0.25 mile of those planning districts are listed.

Table 4.12-3. Schools in the Vicinity of the Planning Districts

School District	Schools	Distance to Planning District(s)
San Diego Unified School District	Cabrillo Elementary School	0.14 mile northwest of PD1
	Perkins Elementary School	0.22 mile northeast of PD4
Sweetwater Union High School District	National City Adult School	0.20 mile east of PD5
San Diego County Office of Education	Monarch School (Special Education)	0.07 mile east of PD4

San Diego Unified School District

Planning Districts 1, 2, 3, 4, and 10 are within the jurisdiction of the San Diego Unified School District (SDUSD), which serves more than 121,000 students from pre-kindergarten through high school, and also provides adult school programs (SDUSD 2021). There are two school facilities within 0.25 mile of the planning districts. Cabrillo Elementary School is located 0.14 mile northwest of PD1, and Perkins Elementary School is located 0.22 mile northeast of PD4.

Sweetwater Union High School District

The Sweetwater Union High School District (SUHSD) serves more than 40,000 students in grades 7 through 12 in the cities of Chula Vista, Imperial Beach, National City, and San Diego. Within the city of San Diego, SUHSD operates schools in Bonita, Eastlake, Otay Mesa, San Ysidro, and south San Diego. SUHSD also has adult learning facilities, which serve approximately 22,000 adult students (SUHSD 2021). There are no school facilities within 0.25 mile of the planning districts.

San Diego County Office of Education

The San Diego County Office of Education (SDCOE) runs school facilities for students with special needs. The SDCOE supports 780 schools and more than 500,000 students across the county (SDCOE 2021). There is one school facility within 0.25 mile of the planning districts. Monarch School is a K-12 public school serving needs of children impacted by homelessness, and is located 0.07 mile east of PD4.

4.12.2.4 Parks and Recreational Facilities

Park and recreational facility capacity within the proposed PMPU area is not quantified and depends upon activities that vary on a daily basis. For example, a grass field might be nearly empty several days of the week, used for a sporting event on another day, and support a music concert the next. Generally, parks within the proposed PMPU area tend to be busier on holiday weekends. If certain facilities are being used, individuals may participate in the current activity (e.g., a public festival), identify a portion of the park separated from the activity, or choose one of several alternative recreational areas within the proposed PMPU area.

In addition, there are no District-specific park planning standards to consider. However, as discussed in Section 4.12.3.2, the California Coastal Act of 1976 (CCA) includes requirements for the provision of public access and recreational opportunities within the coastal zone.

State of California

The California Department of Parks and Recreation operates Silver Strand State Beach, a day-use and overnight park located on Silver Strand, along 2.5 miles of oceanfront and 0.5 mile of bayfront. Silver Strand State Beach is within PD9.

San Diego Unified Port District

The District manages 22 parks and miles of walking and biking trails along the waterfront to make up approximately 284.1 acres of Recreation Open Space within the District Tidelands (Figure 4.12-1) (District 2021b). The District maintains these recreation spaces and issues permits for group use for 13 of the 22 parks. The District's jurisdiction also includes 750.1 acres of open bay, available for recreational use.

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- Planning District
- Parks within PMPU Area
- 1-Shelter Island Shoreline Park
- 2-Point Loma Marina Park
- 3-Spanish Landing Park
- 4-Harbor Island Park
- 5-Lane Field Park
- 6-Broadway Plaza
- 7-Tuna Harbor Park
- 8-Ruocco Park
- 9-Embarcadero Marina Park North
- 10-Embarcadero Marina Park South
- 11-Fifth Avenue Landing Park
- 12-San Diego Bayfront Park
- 13-Cesar Chavez Park
- 14-Coronado Landing Park
- 15-Coronado Tidelands Park
- 16-Grand Caribe Shoreline Park
- 17-Dunes Park
- 18-Portwood Pier Plaza

Source: Parks - SANGIS, 2021.

0 3,750 7,500

Feet

1 inch = 7,500 feet

Figure 4.12-1
Existing Parks within the PMPU Area
Port Master Plan Update

City of San Diego

The City of San Diego operates 49 parks within 2 miles of the planning districts. A portion of Children’s Park is located within PD3. The remaining portion of Children’s Park, as well as King Promenade and Marina Linear Park, are located 0.02 mile east of PD3. Additionally, Naval Training Center Park is located 0.05 mile west of PD2.

City of Imperial Beach

The City of Imperial Beach has a Parks and Recreation Committee that advises the City Council on matters of the park facilities and recreational programs (City of Imperial Beach 2021b). Imperial Beach has six parks within its jurisdiction.

City of Coronado

The City of Coronado Recreation and Golf Services Department operates several recreational facilities, including a community center, boathouse, golf course, tennis center, skate park, and 19 outdoor parks (City of Coronado 2021b). One park operated by the City of Coronado, Centennial Park, is partially located within the District’s jurisdiction. Three parks are directly adjacent to water area within PD10, including Glorietta Bay Park Promenade, and Pocket Park.

4.12.3 Laws, Regulations, Plans, and Policies

4.12.3.1 Federal

United States Coast Guard Marine Safety Program

Code of Federal Regulations (CFR) Title 33 regulates the navigation and navigable waters of the U.S. 33 CFR Chapter 1 provides the rules and regulations to be enforced by the Coast Guard to ensure the safety of vessels within Coast Guard jurisdictional waterways. Pursuant to 33 CFR Part 100, the Coast Guard implements the Marine Safety Program, which is designed to ensure the safety of life during regattas and marine events conducted on navigable waters events.

4.12.3.2 State

California Coastal Act

The CCA established a coastal zone boundary within which specific planning and development requirements must be met in order to protect and preserve the State’s coastal resources. These requirements are enforced by the Coastal Commission and are implemented through the District’s Port Master Plan. Chapter 3, Articles 2 and 3, of the CCA includes policies that govern public access and recreational opportunities. Policies included in Article 2 pertain to maintaining access to the coast, providing coastal access from the nearest public roadway to the shoreline, and avoiding overcrowding along the coast. Article 3 includes policies promoting recreational boating in coastal waters and maintaining areas suited for water-oriented recreational activities.

California Building Code – Title 24, Part 9

The 2019 Fire and Building Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout the state.

More specifically, the Fire Code is included in Title 24 of the California Code of Regulations (CCR). California Fire Code Title 24, Part 9, Chapter 7 addresses Fire-Resistances – Rated Construction; California Building Code (Part 2) Chapter 7A addresses Materials and Construction Methods for Exterior Wildfire Exposure; Fire Code Chapter 8 addresses fire related Interior Finishes; Fire Code Chapter 9 addresses Fire Protection Systems; and Fire Code Chapter 10 addresses fire related Means of Egress, including Fire Apparatus Access Road width requirements. Fire Code Section 4906 also contains existing regulations for vegetation and fuel management to maintain clearances around structures.

California Code of Regulations, Title 8

Title 8 of the CCR is a rule developed by the Federal Occupational Safety and Health Administration in 1993 and adopted by the State of California. This rule is comparable to the Federal standards described above. Occupational safety standards exist in Federal and State laws to minimize worker safety risks from both physical and chemical hazards in the workplace. These standards would be applicable to both construction and operation of probable future projects proposed under the PMPU. Sections 1500-1962 of Title 8 contain Construction Safety Orders. Section 1509 requires the implementation of an Injury and Illness Prevention Program. Section 1512 requires employers to ensure the availability of emergency medical services and trained first aid personnel. Sections 1597-1599 contain regulations governing vehicles, traffic control, flaggers, barricades, and warning signs. Section 1920 requires the establishment of an effective fire prevention program to be followed throughout all phases of the construction work. This section also requires well-maintained fire-fighting equipment to be freely accessible at all times and placed in a conspicuous location. Additionally, Section 1921 requires an adequate water supply to be available for firefighting if combustible materials accumulate on site, and Section 1922 contains provisions for fire extinguisher maintenance and locations. Furthermore, CCR Title 8 contains regulations governing safe practices and personal protection (Sections 3300-3416), fire protection during operation (Sections 6150-6184), and control of hazardous substances (Sections 5139-5223).

California Public Trust Doctrine

The Public Trust Doctrine is a common law doctrine that provides that public lands and waters are held by the State or its delegated trustee (i.e., the California State Lands Commission [CSLC]) for the benefit of all the people of California. All tidelands and submerged lands, granted or ungranted, as well as navigable rivers, sloughs, etc., are covered under the Public Trust Doctrine. The Public Trust Doctrine, as overseen by CLSC, restricts the types of land uses allowed on public lands, including within the District's jurisdiction. The Public Trust Doctrine limits the uses of sovereign lands to

waterborne commerce, navigation, fisheries, open space, water-oriented recreation, ecological habitat protection, or other recognized public trust purposes.

California Department of Transportation Encroachment Permit

Construction within state highway rights-of-way would require a California Department of Transportation (Caltrans) Encroachment Permit, which includes a Traffic Control Plan in compliance with the *Manual on Uniform Traffic Control Devices* (MUTCD) (Traffic Control Plans Part 6). As part of these requirements, there are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilities crossover by emergency vehicles, and vehicle storage and staging area for emergency vehicles.

San Diego Unified Port District Act

The San Diego Unified Port District Act (Port Act) (Appendix 1 of the California Harbor and Navigation Code) was adopted in 1962. Through the Port Act, the State delegated its authority to the District to manage and control certain tidelands and submerged waters. Specifically, the District was established for the development, operation, maintenance, control, regulation, and management of the tidelands and lands underlying the inland navigable waters of San Diego Bay, and for the promotion of commerce, navigation, fisheries, and recreation. Under the Port Act, the District was granted broad police powers. The Port Act requires the District to exercise its land management authority and powers over (1) the tidelands and submerged lands granted to the District and (2) any other lands conveyed to the District by any city or the County of San Diego or acquired by the District. The Port Act grants the District exclusive police power over property and development subject to its jurisdiction. A Port Master Plan (PMP) is also required by the Port Act, which must specify the water and land uses within the District's jurisdiction. The following sections of the Port Act pertain to public services and recreation.

- **Section 56** – the board shall make and enforce such local police and sanitary regulations relative to the construction, maintenance, operation, and use of all public services and public utilities in the district, operated in connection with or for the promotion or accommodation of commerce, navigation, fisheries, and recreation therein as are not vested in the District.
- **Section 57** – the board may acquire, construct, erect, maintain or operate within the District, all improvements, utilities, appliances or facilities which are necessary or convenient for the promotion and accommodation of commerce, navigation, fisheries and recreation, or their use in connection therewith upon the lands and waters under the control and management of the board, and it may acquire, maintain and operate facilities of all kinds within the District (Amended 1963).
- **Section 87(a)(5) and (6)** – the tide and submerged lands conveyed to the district by any city included in the district shall be held by the district and its successors in trust and may be used for purposes in which there is a general statewide purpose, as follows:
 - (5) For the construction, reconstruction, repair, maintenance, and operation of public buildings, public assembly and meeting places, convention centers, parks, playgrounds, bathhouses and bathing facilities, recreation and fishing piers, public recreation facilities, including, but not limited to, public golf courses, and for all works, buildings, facilities,

utilities, structures, and appliances incidental, necessary, or convenient for the promotion and accommodation of any such uses.

- (6) For the establishment, improvement, and conduct of small boat harbors, marinas, aquatic playgrounds, and similar recreational facilities, and for the construction, reconstruction, repair, maintenance, and operation of all works, buildings, facilities, utilities, structures, and appliances incidental, necessary, or convenient for the promotion and accommodation of any of those uses, including, but not limited to, snack bars, cafes, restaurants, motel, launching ramps, and hoists, storage sheds, boat repair facilities with cranes and marine ways, administration buildings, public restrooms, bait and tackle shops, chandleries, boat sales establishments, service stations and fuel docks, yacht club buildings, parking areas, roadways, pedestrian ways, and landscaped area.

School Funding

The CCR Title 5 Education Code, governs all aspects of education within the State. California State Assembly Bill (AB) 2926—School Facilities Act of 1986—was enacted by the State of California in 1986 and added to the California Government Code (Section 65995). It authorized school districts to collect development fees, based on demonstrated need, and generate revenue for school districts for capital acquisitions and improvements. It also established that the maximum fees which may be collected under this and any other school fee authorization are \$1.50 per square foot for residential development and \$0.25 per square foot for commercial and industrial development. AB 2926 was expanded and revised in 1987 through the passage of AB 1600, which added Section 66000 et seq. of the Government Code. Under this statute, payment of statutory fees by developers serves as exclusive mitigation under the California Environmental Quality Act (CEQA) to satisfy the impact of development on school facilities.

As part of the further refinement of the legislation enacted under AB 2926, the passage of Senate Bill (SB) 50 in 1998 defined the Needs Analysis process in Government Code Sections 65995.5–65998. Under the provisions of SB 50, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. SB 50 generally provides for a 50/50 State and local school facilities match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether State funding is available; whether the school district is eligible for State funding; and whether the school district meets certain additional criteria involving bonding capacity, year-round schools, and the percentage of moveable classrooms in use.

California Government Code sections 65995–65998 implements SB 50. Specifically, in accordance with Section 65995(h), the payment of statutory fees is “deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization...on the provision of adequate school facilities.”

Pursuant to Government Code Section 65995(i), “[a] State or local agency may not deny or refuse to approve a legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in section 56021 or 56073 on the basis of a person's refusal to provide school facilities mitigation that exceeds the amounts authorized pursuant to this section or pursuant to section 65995.5 or 65995.7, as applicable.”

California Education Code Section 17620(a)(1) states that the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities.

SDUSD collects school impact fees on commercial/industrial construction in the PMPU area within its boundaries (SDUSD 2020), including PD1, PD2, PD3, and PD4. The Sweetwater Union High School District collects fees for non-residential projects for the PMPU area within its boundaries, including PD8 (Sweetwater Union High School District 2018). The Coronado Unified School District collects fees on non-residential construction in the PMPU area within its boundaries, including PD10 (City of Coronado 2018).

4.12.3.3 Local

City of San Diego

Municipal Code Section 129.0702

Municipal Code Section 129.0702 requires the Public Right-of-Way Permit for Traffic Control for all public improvement projects, construction projects, and other work that encroaches into the public right-of-way including sidewalks. The permit requires the preparation and submittal of a traffic control plan that must conform to the 2014 California Manual on Uniform Traffic Control Devices, and Standard Specifications for Public Works Construction, including Regional Supplemental Amendments and City of San Diego Supplemental Amendments.

Municipal Code Section 142.0640

San Diego Municipal Code Section 142.0640 requires the payment of Development Impact Fees (DIF) prior to issuance of Building Permits in areas where Development Impact Fees have been established by City Council resolution or ordinance. DIFs are assessed throughout the City of San Diego and can also employ the Facilities Benefit Assessment methodology. A DIF in a Facilities Benefit Assessment community historically has provided 100 percent of funds for public facilities projects within that community and are identified in a Public Facilities Financing Plan. Portions of the PMPU area—including PD1, PD3, and portions of PD4—fall within Facilities Benefit Assessment communities.

Additionally, the City Manager may also require the payment of a DIF prior to issuance of any construction permit issued or required for development that would increase demand for public facilities and/or result in the need for new public facilities. Future private development allowed under the proposed PMPU within PD1 through PD4 would be required to obtain building permits from the City of San Diego, and therefore would be subject to San Diego Municipal Code Section 142.0640.

City of Imperial Beach

Municipal Code Section 12.04.020

Municipal Code Section 12.04.020 states that “[e]xcept as may otherwise be expressly provided by ordinance of the City, no work shall be performed in any public right-of-way of the City without the

person, firm or corporation which is going to perform the work or which is going to cause the work to be performed first having obtained a permit from the Director of Public Works of the City authorizing the performance of the work.” Work within the public right-of-way in Imperial Beach requires a Temporary Encroachment Permit.

Construction Impact Fees

The City of Imperial Beach construction impact fee program applies a Sewer Impact Fee and a School Impact Fee to new commercial development. Any future development projects in PD8 would be subject to Imperial Beach construction impact fees.

City of Coronado

Municipal Code Section 52.08

Section 52.08 of the City of Coronado Municipal Code outlines the requirements for Encroachment Permit applications for any private, permanent/fixed improvements proposed within the public right-of-way, and outlines the process for the City of Coronado Engineer to receive and review applications for encroachments, stating that “no such application shall be approved if a determination is made that the encroachment structure will adversely affect the public health, safety or general welfare.” This process allows Coronado to condition projects to protect public access and is designed to prevent undue inconvenience to the public.

Municipal Code Section 52.10

Under Section 52.10 of the City of Coronado Municipal Code, it is unlawful for anyone to place, remove, or replace any item within the public right-of-way or on public property or to do any work in the public right-of-way or on public property without first having obtained a Right-of-Way Permit. A Right-of-Way Permit is required for all work on public property, such as repairs to sidewalks, curbs and gutters, driveway aprons, and parkways (the area between the sidewalk and the curb) or to place equipment in the public right-of-way, such as a crane placed in the street to transport materials to a second story. A Right-of-Way Permit authorizes a contractor to temporarily occupy the public right-of-way for construction of said improvement. Section 52.10.060 includes specific requirements for traffic control around the work site. Permittees are required to place and maintain all necessary barrier, guards, lights, signs, flagmen, and watchmen to adequately control vehicular and pedestrian traffic around the work site and to advise the public of detours and construction hazards. Such control devices must be installed to the satisfaction of the City Engineer, and, where the permittee fails to satisfactorily control traffic and warn of safety hazards, the City Engineer may require additional control devices to be erected at the expense of the permittee.

Public Facilities Fees and School Impact Fees

Chapter 8.20 of the City of Coronado Municipal Code imposes Public Facilities Fees on new construction in order to accommodate additional development without lowering the level of public service. Public Facilities Fees allow new development to mitigate at least a portion of its impacts on the City of Coronado’s capital facilities. Additionally, the City of Coronado applies School Impact Fees to non-residential construction.

4.12.4 Project Impact Analysis

4.12.4.1 Methodology

This section analyzes the potential impacts on public services and recreational facilities associated with future development projects allowed under the proposed PMPU. The impact analysis considers whether the construction of new or expanded public facilities would be required to accommodate demand from future PMPU-related development. If required, the analysis determines if the physical construction would result in a significant impact on the environment and if mitigation is necessary. It should be noted that the need for additional public services based on delayed response times or inadequate service ratios is not considered an impact on the environment (*City of Hayward v. Board of Trustees of the California State University* [2012]). Likewise, the potential safety hazards associated with delayed response times do not mandate a finding of significance under State CEQA Guidelines Section 15065. Rather, it is the physical impacts associated with the construction of new or expanded facilities that would potentially constitute a significant impact.

Similarly, recreational impacts are considered relative to the proposed PMPU's potential to accelerate the physical deterioration of existing recreational facilities. In addition, the proposed PMPU designates parcels within the proposed PMPU area for Recreation Open Space uses, which would potentially result in the construction of recreational amenities that would have the potential to directly result in a physical impact on the environment.

In addition to a review of relevant plans and policies, fire, emergency and police protection service providers were contacted to determine if the proposed PMPU would potentially lead to new or physically altered facilities. Their responses are summarized in Section 4.11.4.4, *Project Impacts and Mitigation Measure*.

4.12.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of public services and recreation impacts resulting from the implementation of the proposed PMPU. The determination of whether public services or recreation impacts would be significant is based on the thresholds described below, the methodology described in Section 4.12.4.1, and the professional judgement of the District as the Lead Agency, based on the evidence in the administrative record.

Impacts are considered significant if the PMPU would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services?
2. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services?

3. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools?
4. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?
5. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
6. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

4.12.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policies would have the potential to reduce or avoid impacts associated with adverse impacts on the environment associated with the need for, or provision of, new or physically altered government facilities in order to maintain acceptable service criteria, due to implementation of the PMPU and are considered in the impact analysis that follows.

SR Policy 1.2.2 Development shall incorporate project design features, including, but not limited to crime prevention through enhanced security measures that create a safe environment on the development site without limiting public access.

SR Policy 1.3.1 The District shall provide public safety facilities on water and on land for the HPD to maintain public safety capabilities in alignment with the Port Act.

WLU Policy 1.1.6 Allowable water and land uses within the District shall be in accordance with one of six Public Trust–related categories (refer to Table 3.1.2, Allowable Use Types for Water Use Designations and Table 3.1.3, Allowable Use Types for Land Use Designations):

- a. Commerce
- b. Environmental Stewardship
- c. Fisheries
- d. Navigation
- e. Recreation
- f. Government Facilities

WLU Policy 3.2.5 Development shall be set back from the water’s edge and recreation open space to avoid creating a walling-off effect.

WLU Policy 4.1.1 There shall be no net loss of acreage designated as Recreation Open Space in a subdistrict or in a planning district if no subdistrict exists.

WLU Policy 4.1.2 Recreation Open Space should be designated along the water’s edge.

WLU Policy 4.1.3 Recreation Open Space areas shall be publicly accessible to a diverse user group with the intent of providing a variety of water-oriented experiences.

WLU Policy 4.1.4 Public accessways and recreation facilities provided as part of development shall be maintained for public use over the anticipated life of the development with which they are associated.

WLU Policy 4.1.5 The design and location of Recreation Open Space shall be in accordance with Section 4.2, Recreation Open Space and Activating Features Standards (Chapter 4, Baywide Development Standards).

WLU Policy 4.1.6 The District shall require, where feasible, the integration of non-privatized, physically accessible public realm areas and amenities into development such as parks, courtyards, water features, gardens, passageways, paseos, and plazas.

WLU Policy 4.1.7 The District shall require permittees of coastal-enhancing development to allow, maintain, and promote free, public access to the public realm on their development site.

WLU Policy 4.2.1 The District shall require permittees of coastal-enhancing development to provide a wide array of uses for the public that:

- a. Offer a variety of recreational uses;
- b. Complement adjacent waterfront uses and activities; and
- c. Maximize attributes of each location to offer a range of experiences to the user and appeal to a variety of visitors.

WLU Policy 4.2.2 The District shall encourage establishment of activating features that support existing amenities and introduce new activities in recreation areas. Permittees, of development containing Recreation Open Space within the leasehold, shall plan, design, and implement activating features, which are:

- a. Commensurate with the intensity of land uses within the permittee's development site;
- b. Consistent with an Activation Plan developed by the permittee and approved by the District;
- c. In accordance with Chapter 4, Baywide Development Standards; and
- d. In accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

WLU Policy 4.2.3 Attractions are encouraged within the Commercial Recreation land use designation and shall be:

- a. Sited to increase the use of, and be integrated with, the waterfront experience;
- b. Located in areas supported by mobility hubs, curbside management, and pedestrian amenities to support multimodal access throughout Tidelands; and
- c. Complementary to other visitor-serving attractions.

WLU Policy 4.2.6 All parks, including those within leaseholds, shall be open to the general public during park hours for at least 85 percent of the year. No more than 15 percent of the year shall permitted temporary large special events (in accordance with the District's procedures and guidelines, once established) limit public access (i.e., exclude the public or require admission for

entry) in parks. The 15 percent shall be distributed throughout the year and not occur only in the summer months.

WLU Policy 4.3.1 The District shall encourage boating and pier access for recreational and subsistence fishing throughout Tidelands, where feasible, by requiring permittees of applicable development to provide public fishing or viewing piers and boating access. Maintenance may be provided by third parties.

WLU Policy 4.3.2 The District shall retain, where feasible, temporary anchorages for transient recreational vessels.

WLU Policy 4.3.3 Designated anchorage areas shall be located:

- a. To minimize interference with navigation; and
- b. Where support facilities are available.

WLU Policy 4.3.4 Permittees of recreational marina development shall incorporate low-cost transient docking slips in their recreational marina

WLU Policy 4.3.5 Proposed recreational boating facilities in Tidelands shall, to the extent feasible, be designed and located in such a fashion so as not to interfere with the needs of the commercial fishing industry.

WLU Policy 5.1.3 All development shall be located, designed, and constructed to:

- a. Give highest priority to the use of existing land space in harbors for coastal-dependent port purposes, including, but not limited to, navigational facilities, shipping industries, and necessary support and access facilities.
- b. Provide for other benefits consistent with the Public Trust, including, but not limited to: improved recreational opportunities in the public realm, including Recreation Open Space that is adjacent to the water's edge, or the conservation of adjacent wildlife habitat areas, to the extent feasible.

WLU Policy 6.1.1 Permittees of development are encouraged to provide a variety of lower cost visitor and recreational facilities to improve coastal access.

WLU Policy 6.1.2 Recreation Open Space areas shall support programming and a variety of recreational activities, with a wide range of affordability and price points to ensure all visitors are able and encouraged to experience the waterfront.

WLU Policy 6.1.3 To offer flexibility to permittees, the District may offer a range of geographic options or a District-established in-lieu fee program for the development of new, or replacement, lower cost visitor and recreational facilities.

WLU Policy 6.1.4 The District may elect to establish an in-lieu fee program that permittees may participate in to satisfy the requirement for provision of lower cost visitor and recreational facilities, with the following conditions:

- a. The in-lieu fee program shall apply only where the provision of lower cost visitor and recreational facilities is not feasible either on the existing development site or elsewhere on Tidelands.

- b. Any collected in-lieu fees shall be used on Tidelands for the provision of lower cost visitor and recreational facilities.
- c. For lower cost overnight accommodations only, the following exceptions apply:
 - 1. In assessing the feasibility for on-Tidelands lower cost accommodations, the District may consider whether the required amount of new or replaced lower cost overnight accommodations can be accomplished in one development.
 - 2. Collected in-lieu fees shall be used to develop only lower cost overnight accommodations (in order of priority):
 - i. On Tidelands, or
 - ii. In the San Diego County Coastal Zone, if on Tidelands is not feasible.

WLU Policy 6.2.1 Lower cost visitor and recreational facilities shall be protected in the aggregate on Tidelands. Protection of existing facilities allows for preventive maintenance, major maintenance, or facility upgrades even if temporary closure or limited public access to the facility occurs during these activities and times.

WLU Policy 6.2.5 Displaced lower cost visitor and recreational facilities, excluding overnight accommodations, shall be replaced with comparable facilities that may be of a similar or different type if specific conditions are demonstrated through a comparative demand study (refer to WLU Policy 6.2.6 and WLU Policy 6.2.7). The comparative demand study must be submitted and approved by the District before the project application is submitted to the District.

WLU Policy 6.2.6 For replacement of displaced lower cost visitor and recreational facilities, excluding overnight accommodations, with a facility (or facilities) of a similar type(s) (refer to WLU Policy 6.2.5), the comparative demand study must demonstrate:

- a. The new facility will likely result in an equal or increased amount of public use when compared to the facility being replaced; and
- b. When implemented, the new facility will be of a scale and size comparable to those of other, similar facilities in a coastal setting.

WLU Policy 6.2.7 For replacement of displaced lower cost visitor and recreational facilities with a facility (or facilities) of different type(s) (refer to WLU Policy 6.2.5), the comparative demand study must demonstrate:

- a. The new lower cost visitor and recreational facility will likely provide greater opportunities for a variety of visitors to access and recreate on Tidelands than the facility being replaced; and
- b. There is an increase in demand for the replacement lower cost visitor and recreational facility compared with the existing facility.

WLU Policy 7.1.1 Permittees of development derives benefits from its location on Tidelands and, accordingly, shall provide or contribute to planned improvements that facilitate public health and safety and the public welfare and provide public coastal access and enjoyment of the waterfront.

WLU Policy 7.1.2 Except as set forth under WLU Policy 7.3.3, permittees of all major development shall be required to provide or contribute toward planned improvements identified for a planning

district in Chapter 5, Planning Districts, Planned Improvements. The three primary categories of planned improvements are defined below:

- a. **Landside access:** Improvements to transportation and mobility infrastructure that enhance the public's ability to access and explore the public realm and perform commerce on Tidelands. Landside access may include mobility hubs, improvements to a variety of accessways, and implementation of the bayfront circulator.
- b. **Coastal access:** Physical features designed to provide new or enhance existing water access. Examples include pier improvements, overnight transient docking and mooring, public water access, and short-term public docking.
- c. **Visitor-serving commercial uses:** Visitor-serving commercial uses provide opportunities for the public to access and enjoy Tidelands, including the use of non-water-oriented retail and overnight accommodations.

Permittees of minor development may be required to provide or contribute toward planned improvements as identified for a planning district in Chapter 5, Planning Districts, Planned Improvements and as supported by a subsequent program created by the District.

EJ Policy 1.2.1 All appealable development shall provide a range of free and lower cost recreational facilities throughout Tidelands that are accessible to disadvantaged communities, where feasible.

EJ Policy 1.3.1 Avoid a net loss of recreational open space acreage adjacent to disadvantaged communities, measured in both the size and the quality of the resource, due to development.

EJ Policy 1.3.2 Through CDPs issued by the District, permittees shall protect and, where feasible, expand free and lower cost recreational facilities, including but not limited to recreational fishing or swimming opportunities, parks, or viewing piers, on Tidelands adjacent to Portside and Tidelands Border Communities.

ECON Policy 2.3.3 The District shall provide maritime and marine infrastructure for operation and maintenance of commercial and recreational vessels. Maritime and marine infrastructure may be provided by third parties, including District tenants through public-private partnerships and leases with the District.

ECON Policy 2.3.9 The District and applicable permittees shall support existing recreational boating on Tidelands through maintenance of marina-related facilities, including docks, piers, slips, and boat launch ramps.

ECON Policy 2.3.10 The District and applicable permittees shall promote opportunities for the public to learn, share, and enjoy recreational boating through boating education programs, organizations, and clubs.

ECON Policy 2.3.11 The District shall coordinate with commercial fishing, recreational fishing, and sportfishing operations to identify and prioritize facility improvements that benefit the fishing business community.

ECON Policy 2.4.1 The District encourages the provision of a variety of active and passive recreational opportunities to attract a diverse mix of visitors to Tidelands.

ECON Policy 2.4.2 The District shall promote the creation of diverse activating features in areas designated with a Recreation Open Space land use to provide a variety of opportunities for visitors to explore and enjoy Tidelands.

ECON Policy 2.4.3 The District shall promote and support implementation of visitor-serving development and amenities that celebrate the San Diego region's binational setting, natural resources, history, culture, and arts.

4.12.4.4 Project Impacts and Mitigation Measures

Threshold 1: Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services?

Impact Analysis

Construction

With implementation of the proposed PMPU, landside and waterside construction activities would be probable in PD1–PD3 and PD8–PD10. Construction of future development in these planning districts could require fire protection services for potential construction-related injuries or accidental fire incidents due to the use of flammable materials and certain equipment, or due to upgrades or installation of electricity utilities. Fire and medical emergency response within the proposed PMPU area would be provided by HPD, SDFD, IBFRD, and/or CFD, which have fire stations in or near each planning district, as described in Section 4.12.2, *Existing Conditions*. For incidents that would occur during in-water construction activities, HPD provides marine firefighting services in and around San Diego Bay for the District. In addition to watercraft enforcement, HPD patrol boats can also serve as firefighting boats that respond to fire emergencies in the Bay. Construction of the future in-water development may generate an increased need for HPD's fireboats should any waterside emergencies occur. HPD's fireboats cooperate with the adjacent cities' fire departments and emergency responders, if necessary. Vessels would respond in the event of a marine-firefighting incident from either the Shelter Island HPD substation or the Chula Vista HPD substation, depending on who is closest at the time of the call.

Future development projects within the proposed PMPU area would comply with Sections 1500–1962 of CCR Title 8, Construction Safety Orders. Section 1509 requires the implementation of an Injury and Illness Prevention Program, Section 1512 requires employers to ensure the availability of emergency medical services and trained first aid personnel, and Sections 1597–1599 contain regulations governing vehicles, traffic control, flaggers, barricades, and warning signs. Section 1920 requires the establishment of an effective fire prevention program to be followed throughout all phases of the construction work. This section also requires well-maintained fire-fighting equipment to be freely accessible at all times and placed in a conspicuous location. Additionally, Section 1921 requires an adequate water supply to be available for fire-fighting if combustible materials accumulate on site and Section 1922 contains provisions for fire extinguisher maintenance and

locations. Therefore, compliance with these regulations would reduce the potential for construction-related injuries or accidental fire incidents requiring fire protection services from providers within the proposed PMPU area. Adherence with CCR regulations would ensure that fire and injury prevention measures are implemented at construction sites, and, thus, construction activities would not increase demand on fire protection services to the extent that new or expanded facilities would be required to maintain adequate service. SDFD confirmed that construction activities currently occurring within the proposed PMPU area do not significantly increase call volume due to these existing safety regulations (Webber pers. comm.).

Regarding emergency access, as discussed in Section 4.7, *Hazards and Hazardous Materials*, each future PMPU-related project would be required to comply with specific requirements set forth by the agencies responsible for emergency response at the future project site, including Sections 1500-1962 of CCR, Title 8, which requires implementation of injury and prevention programs, provision of emergency medical services and trained first-aid personnel, and establishment of effective fire prevention programs to be followed throughout all phases of the construction work. In addition, the District requires emergency response plans and emergency operations plan, as identified in SR Policy 2.1.2 and SR Policy 2.1.3, to be implemented as part of the proposed PMPU. Furthermore, as discussed in Section 4.14, *Transportation, Circulation, and Mobility*, project proponents would be required to obtain a temporary encroachment and/or right-of-way permit from the appropriate jurisdiction(s) prior to commencing construction to ensure that adequate emergency access would be maintained during construction (see Section 4.14.3.3 for applicable local regulations). Compliance with these existing regulatory requirements would ensure that construction of future PMPU-related development would not result in inadequate emergency access.

Implementation of the proposed PMPU would occur within a developed area, with most of the future development projects occurring in PD2 and PD3, near Downtown San Diego. While the number of construction sites fluctuates based on the local economic and market conditions, these are areas where construction activities take place regularly and where fire protection services are already provided by nearby fire stations.

Construction activities occurring under implementation of the proposed PMPU would experience a similar fluctuation based on local economic conditions and would occur intermittently throughout the 30-year life of the PMPU depending on market conditions. Consequently, future development projects consistent with the proposed PMPU is not anticipated to increase the intensity or frequency of construction activities simply with its adoption and implementation. Rather, implementation of the proposed PMPU would be the continuation of this type of activity and would not increase the overall demand for fire services for construction-related activities. Based on the above, temporary construction activities associated with implementation of the proposed PMPU are not expected to increase the demand on fire protection services such that there would be a need for new or expanded permanent fire protection facilities (Webber pers. comm.). Therefore, no new or physically altered government facilities would be required that would result in physical impacts on the environment due to construction activities. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, *Project Description*, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with

different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the need for new or expanded fire protection facilities.

Construction activities associated with Option 1 could result in incidents that may require fire or medical emergency response; however, construction would occur within a developed area of PD3, in Downtown San Diego. While the number of construction sites fluctuates based on the local economic conditions, construction activities take place regularly in the Downtown area, and construction of Option 1 would be a continuation of these activities. In addition, construction of Option 1 would be required to adhere to the regulations described above, including Sections 1500–1962 of CCR Title 8, etc., which would reduce the potential for construction-related injuries or accidental fire incidents requiring fire protection services. Therefore, construction under Option 1 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to fire protection services than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the need for new or expanded fire protection facilities.

Construction activities related to the implementation of Option 2 could also result in incidents that may require fire or medical emergency services; however, construction would occur within a developed area of PD3, in Downtown San Diego. While the number of construction sites fluctuates based on the local economic conditions, construction activities take place regularly in the Downtown area, and construction of Option 2 would be a continuation of these activities. In addition, construction of Option 2 would be required to adhere to the regulations described above, including Sections 1500–1962 of CCR Title 8, etc., which would reduce the potential for construction-related injuries or accidental fire incidents requiring fire protection services. Therefore, construction activities under Option 2 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to fire protection services than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU would result in a less-than-significant impact related to the need for new or expanded fire protection facilities.

Construction activities related to the implementation of Option 3 could also result in incidents that may require fire or medical emergency services; however, construction would occur within a developed area of PD3, in Downtown San Diego. While the number of construction sites fluctuates based on the local economic conditions, construction activities take place regularly in the Downtown area, and construction of Option 3 would be a continuation of these activities. In addition, construction of Option 3 would be required to adhere to the regulations described

above, including Sections 1500–1962 of CCR Title 8, etc., which would reduce the potential for construction-related injuries or accidental fire incidents requiring fire protection services. Therefore, construction activities under Option 3 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to emergency response services than buildout of the proposed PMPU without Option 3.

Operation

The operation of future development projects allowed under the proposed PMPU would not include residential development, which is prohibited by the Port Act. As such, there would not be new permanent residents in the District’s jurisdiction that would increase demand on fire protection services. Additionally, as the proposed PMPU area is a defined area and new development occurring under the proposed PMPU would primarily involve infill development, implementation of the proposed PMPU would not expand the current service areas of public service providers. However, visitor-serving facilities that could be developed as part of PMPU implementation may include up to approximately 3,910 new hotel rooms, in new hotel establishments or expanded existing hotel facilities; 339,489 square feet of new retail and restaurant space; and 485 new recreational boat slips above existing conditions. In addition, planned improvements in the PMPU would allow for the renovation or replacement-in-kind of hotel rooms, retail, restaurant, and/or meeting space to the same or lesser size, such as in PD1 or PD10.

New buildings associated with visitor-serving land uses would be required to adhere to the latest fire code standards, which would require compliance with California Fire Code Title 24, Part 9. Within Part 9, Chapter 7 provides requirements to maintain the fire-resistance ratings of building elements and to limit fire spread, Chapter 8 provides requirements for interior finishes so they do not add to or create fire hazards in buildings, Chapter 9 prescribes requirements for fire protection systems, and Chapter 10 contains criteria for design of means of egress, including width requirements for fire apparatus access roads. Fire Code Section 4906 also contains existing regulations for vegetation and fuel management to maintain clearances around structures.

The replacement of older buildings with new buildings with up-to-date fire standards would improve fire safety as compared to existing conditions. Implementation of the proposed PMPU would also allow for in-water development, including dock maintenance, vessel slip reconfiguration and enhancement in the water basin, modification of marina capacity, enhancement or modifications to the existing anchorage area supporting transient vessel berthing, and the addition of aquaculture within the proposed PMPU area.

The development of additional visitor-serving uses such as new hotels or expanded hotel buildings, additional retail and restaurant space, as well as expanded marinas would result in additional structures and spaces that would require landside and waterside fire protection services. Increased visitor-serving facilities would result in higher daily visitation to the Tidelands, which may result in a higher demand for fire or medical emergency response services. The following sections describe the potential effects on service demand for each fire protection service provider that could result in the need for new or physically altered fire protection facilities.

Harbor Police Department

The HPD would provide marine-fire protection services on the waterside portions of all of the planning districts, except for PD8. HPD does not provide landside fire protection services within the

proposed PMPU area. Rather, landside fire protection services are provided by the member city in which the planning district is located. As such, the following discussion focuses on waterside development allowed under the proposed PMPU.

Implementation of the proposed PMPU would facilitate in-water development that would result in additional structures and visitors in PD1, PD2, PD3, PD9, and PD10. Future in-water development for these planning districts over a 30-year timeframe could entail the development of a total of approximately 575 new slips for recreational, and commercial fishing boats and anchorage moorings. The increase in visitors, vessels, and recreational boats would increase the demand on marine-fire protection services of the HPD. This increased demand could result in the need for additional staffing or require additional equipment, the accommodation of which may exceed the capacity of existing HPD facilities, resulting in the need to construct new or expand existing government facilities in order to accommodate additional personnel or equipment.

Proposed PMPU SR Policy 1.3.1 would require the District to provide public safety facilities on water and on land for the HPD to maintain public safety capabilities in alignment with the Port Act. While the SDFD has indicated that adequate resources for in-water fire and emergency response services is an area of concern and future in-water development occurring under the proposed PMPU, such as an increased number of recreational boat slips, could require new equipment and new personnel (Webber pers. comm.), both the HPD and SDFD indicated that any additional demand for new equipment and personnel due to implementation of the proposed PMPU would not require new or expanded facilities (Nichols pers. comm.; Fernandez pers. comm.; Webber pers. comm.). Therefore, buildout of the proposed PMPU would not require new or physically altered government facilities or result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts. Impacts would be less than significant.

City of San Diego Fire Department

The SDFD would provide fire protection and medical emergency response services to PD1 through PD4, as described in Section 4.12.2. Future development projections for these planning districts over a 30-year timeframe would entail the development of approximately 3,910 new hotel rooms, in either new hotel establishments or expanded existing hotel facilities; 339,489 square feet of new retail or restaurant space; 162,000 square feet of meeting space; 180,000 square feet of convention space; and up to 485 new recreational boat slips. This would result in additional visitor-serving facilities, and a corresponding increase of visitors, to the SDFD service area, which would increase demand on SDFD fire protection and emergency services. As noted above, new visitor-serving development would likely involve infill development and may replace some older structures with new structures that implement the latest fire code standards, which would help reduce demand on fire protection services.

The potential future development that could occur under the proposed PMPU would increase call volumes, which would have a corresponding effect on response times. Until any additional resources are put in place, the development could affect SDFD's ability to meet both 7.5-minute and 10.5-minute response time goals. However, SDFD has the capability to improve response times in ways other than constructing a new fire station. For example, existing fire stations currently serving the proposed PMPU area (e.g., Fire Stations 22 and 4) have the capacity to house two fire engines, but only have one engine currently. Providing additional equipment (e.g., fire engines) would help address any effects on response times caused by increased development. SDFD may also need to add additional response units to existing fire stations to help accommodate the increase in calls. In

addition, SDFD is currently planning for a new fire station near the San Diego Police Department headquarters in East Village, which would serve the proposed PMPU area in addition to the Downtown San Diego area. The need for this facility is not attributed specifically to buildout under the proposed PMPU, but instead is needed to accommodate growth and development within the Downtown area more generally. There would not be any new facilities needed to serve the proposed PMPU area beyond what is already being planned for by SDFD (Webber pers. comm.).

As noted above, the SDFD has indicated that the primary area of concern regarding buildout of the proposed PMPU is related to insufficient equipment and personnel, and that they would likely require new equipment and additional staff to address the increase in recreational boat slips that could occur with buildout of the proposed PMPU. However, SDFD would not require new or expanded facilities in order to accommodate any new equipment or staff (Webber pers. comm.). As such, buildout of the proposed PMPU would not require new or physically altered government facilities, or result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts. Impacts would be less than significant.

City of Imperial Beach Fire Department

Planning District 8 is served by the IBFRD. Implementation of the proposed PMPU would allow for the future development of approximately 18,000 square feet of new retail and restaurant space within PD8. Given the limited amount of future development that could occur in PD8, it is not anticipated that this development would generate a substantial number of additional visitors to the area, such that there would be an increased demand on the fire and emergency services of the IBFRD. In addition, the IBFRD confirmed that buildout of the proposed PMPU within PD8 would not require new or expanded facilities to accommodate buildout of the proposed PMPU within PD8 (French pers. comm.). Therefore, there would not be a need for new or physically altered IBFRD fire protection and medical emergency response facilities, and impacts would be less than significant.

City of Coronado Fire Department

The CFD would provide fire protection and medical emergency response services to PD9 and PD10, as described in Section 4.12.2. Implementation of the proposed PMPU would allow for the development of approximately 20 new recreational boat slips and 5 anchorages in PD9 and 55 new recreational boat slips and 25 anchorages in PD10, and does not include any new landside development. Future development in PD9 and PD10 is not anticipated to generate a substantial amount of additional visitors to the area, such that there would be an increased demand on the fire and emergency services of the CFD. CFD confirmed that buildout of the proposed PMPU would not require new or expanded facilities to accommodate buildout of the proposed PMPU within PD9 and PD10 (Peake pers. comm.). Additionally, because future development within PD9 and PD10 would consist of waterside features, fire protection services would be provided by the HPD, which provides marine firefighting services for the District. Therefore, there would not be a need for new or physically altered CFD fire protection facilities, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses.

Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to fire protection and emergency response services.

Operations under Option 1 would result in more visitors to the waterfront, which could result in higher demand for medical emergency response services from SDFD but would not increase the demand for fire protection services. As noted above, SDFD has indicated that the area of concern is related to in-water development, such as new recreational boat slips, which may require the need for new equipment and/or staff. However, this would not result in the need for new or expanded facilities for the reasons described above. In addition, Option 1 would not involve any in-water development. Therefore, operations under Option 1 would be less than significant and would not result in any additional or more severe impacts related to emergency response services than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to fire protection services.

Operations under Option 2 would result in more visitors to the waterfront, which could result in higher demand for fire or medical emergency response services from SDFD but would not increase the demand for fire protection services. As noted above, SDFD has indicated that the area of concern is related to in-water development, such as new recreational boat slips, which may require the need for new equipment and/or staff. However, this would not result in the need for new or expanded facilities for the reasons described above. In addition, Option 2 would not involve any in-water development. Therefore, operations under Option 2 would result in less than significant impacts and would not result any additional or more severe impacts related to fire protection services than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to fire protection services.

Operations under Option 3 would result in more visitors to the waterfront, which could result in higher demand for fire or medical emergency response services from SDFD but would not increase the demand for fire protection services. As noted above, SDFD has indicated that the area of concern is related to in-water development, such as new recreational boat slips, which may require the need for new equipment and/or staff. However, this would not result in the need for new or expanded facilities for the reasons described above. In addition, Option 3 would not involve any in-water development. Therefore, operations under Option 3 would result in less than significant impacts and would not result any additional or more severe impacts related to fire protection services than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in physical impacts on the environment related to the construction of new or expanded government facilities in order to maintain service ratios for fire protection and medical emergency response services. As noted above, proposed PMPU SR Policy 1.3.1 would require the District to provide public safety facilities on water and on land for the HPD to maintain public safety capabilities in alignment with the Port Act. However, no new or expanded facilities are anticipated to maintain adequate fire protection.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, or result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services. Impacts would be less than significant.

Threshold 2: Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services?

Impact Analysis

Construction

Police services within the proposed PMPU area would be provided by the HPD, SDPD, San Diego County Sheriff, CPD, and Coast Guard Sector San Diego, which have stations in or adjacent to the proposed PMPU area, as described in Section 4.12.2. Under the proposed PMPU, construction activities would be probable in PD1–PD3 and PD8–PD10. Construction of future development projects in these planning districts could require police protection due to the potential for accidents or safety concerns such as loitering at the construction site, theft, and burglary of construction equipment and materials left unattended. However, implementation of the proposed PMPU would occur within a developed area, with most of the future development occurring in PD2 and PD3, near Downtown San Diego. While the number of construction sites fluctuates based on local economic conditions, these are areas where construction activities regularly occur. While the proposed PMPU provides policy and water/land use guidance for future development projects, construction activities occurring under the proposed PMPU would experience similar fluctuations subject to local economic conditions, and would occur intermittently throughout the 30-year life of the proposed PMPU. As such, implementation of the PMPU would not increase the overall demand for police services due to future construction activities.

Therefore, construction activities associated with increased future development allowed under the proposed PMPU is not expected to require new or expanded police facilities that would result in physical impacts on the environment. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to police protection services.

Construction activities associated with the implementation of Option 1 would occur within developed areas in PD3, in Downtown San Diego, where construction activities are common. While incidents may occur as a result of construction, there would not be an increase in demand for police protection services such that new or physically altered government facilities would be required resulting in physical impacts on the environment. Therefore, construction activities under Option 1 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to police protection services than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to police protection services.

Construction activities associated with the implementation of Option 2 would occur within developed areas in PD3, in Downtown San Diego, where construction activities are common. While incidents may occur as a result of construction, there would not be an increase in demand for police protection services such that new or physically altered government facilities would be required, resulting in physical impacts on the environment. Therefore, construction activities under Option 2 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to police protection services than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction activities under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to police protection services.

Construction activities associated with the implementation of Option 3 would occur within developed areas in PD3, in Downtown San Diego, where construction activities are common. While incidents may occur as a result of construction, there would not be an increase in demand for police protection services such that new or physically altered government facilities would be required, resulting in physical impacts on the environment. Therefore, construction activities under Option 3 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to police protection services than buildout of the proposed PMPU without Option 3.

Operation

Implementation of the proposed PMPU would include the operation of up to approximately 3,910 new hotel rooms, in new hotel establishments or expanded existing hotel facilities; 339,489 square feet of new retail and restaurant space; and 485 new recreational boat slips. Future development would increase the number of annual visitors to the waterfront over the proposed PMPU's planning horizon, which would result in an increased demand on police protection agencies because a higher density of visitors to the area could potentially result in more incidents that require police services. The following describes the potential effects on service demand for each police protection service provider that could result in the need for new or physically altered police protection facilities.

Harbor Police Department

The HPD would provide police protection services to all planning districts, except for PD8, which is served by the San Diego County Sheriff's Department.

Implementation of the proposed PMPU would facilitate waterside and landside development for visitor-serving uses that would result in the increase of visitors to the Tidelands, resulting in a corresponding increase in demand on the HPD for police protection services associated with crime, traffic, and emergency response, along with other police responsibilities. The HPD would work together with the adjacent cities' police protection agencies to provide these services to the planning districts. However, future development implemented consistent with the projections of the proposed PMPU could still require the expansion of policing facilities in order for the HPD to meet the increased demand.

Proposed PMPU SR Policy 1.3.1 would require the District to provide public safety facilities on water and on land for the HPD to maintain public safety capabilities in alignment with the Port Act, which would be beneficial by ensuring that adequate services are provided by HPD. In addition, per SR Policy 1.2.2, future development under the proposed PMPU would incorporate project design features including, but not limited to, crime prevention through enhanced security measures that create a safe environment on the development site without limiting public access, thereby enhancing safety and security for visitors within new and redeveloped areas.

As indicated by the HPD, while implementation of the proposed PMPU may increase demand on HPD services such that new personnel or equipment may be required, this would not result in the need for new or expanded HPD facilities (Nichols pers. comm.). Therefore, buildout of the proposed PMPU would not require new or physically altered government facilities or result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts. Impacts would be less than significant.

City of San Diego Police Department

The SDPD would provide police protection services to PD1 through PD4. Future development projects for these planning districts could entail the development of approximately 3,910 new hotel rooms, in new hotel establishments or expanded existing hotel facilities; 339,489 square feet of new retail or restaurant space; and 485 new recreational boat slips. This development would result in an increase in daily visitors to the proposed PMPU area, as well as overnight visitors staying in hotels in the proposed PMPU area. Additional visitors could result in an increase in demand for police protection services and emergency response needs, particularly having to do with traffic, crime prevention, and crowd control. An increase in demand for these services could increase demand on

personnel and equipment, and make it more difficult for the SDPD to meet adopted response time goals or service ratios. As a result, SDPD may need to add additional personnel or equipment, which may exceed the capacity of their existing facilities. Therefore, it is possible SDPD may need to construct new or expanded facilities in the vicinity of the proposed PMPU area, the construction of which could result in physical impacts on the environment.

Examples of the potential impacts from the construction of new or expanded police protection facilities include construction-related air emissions, greenhouse gas (GHG) emissions, noise and vibration, and energy use. Moreover, depending on the location of a new or expanded facility, impacts may also include disturbance of biological resources, cultural resources, tribal cultural resources, and/or contaminated soils, and impacts from the expanded connection of utilities to serve the new or expanded police protection facility. Once operational, the new or expanded police protection facility may result in operational activity that was not previously located at the site or may result in increased operational activity. Operational impacts could include new or additional siren noise near sensitive receptors that may cause ambient noise levels to exceed hourly or 24-hour noise level standards of the City's Municipal Code and General Plan, increased vehicle miles traveled (VMT) and the associated effects on air quality, GHGs, and energy use. Finally, because the police facility would be located outside of the District's jurisdiction, the District would have limited authority to require and enforce mitigation measures to lessen any significant impacts.

Therefore, because future development, consistent with the proposed PMPU, is entirely based on market conditions and the proposed PMPU does not propose any development or identify any specific locations for a future SDPD facility, the timing, duration, location, and extent of possible construction activities, as well as the certainty of the need for new or expanded police facilities, and the feasibility of the District to mitigate any impacts to less-than-significant levels, are all unknown at this time. As such, the potential physical impacts on the environment from the future construction of any police protection facility are considered significant (**Impact-PS-1**).

County of San Diego Sheriff – Imperial Beach Substation

The County of San Diego Sheriff's Office provides police protection services to PD8 from the Imperial Beach Substation. The implementation of the proposed PMPU would allow for the development of 18,000 square feet of new retail and restaurant space in PD8. Given the limited amount of future development that could occur in PD8, it is not anticipated that this development would generate a substantial number of additional visitors to the area, such that there would be an increased demand on the police protection services of the County of San Diego Sheriff's Office. Therefore, there would not be a need for new or physically altered County of San Diego Sheriff's Office police protection facilities, and impacts would be less than significant.

City of Coronado Police Department

The CPD would provide police protection services to PD9 and PD10. The proposed PMPU would allow for the development of approximately 20 new recreational boat slips and 5 anchorages in PD9 and 55 new recreational boat slips and 20 anchorages in PD10, and does not include any new landside development. Future development in PD9 and PD10 is not anticipated to generate a substantial amount of additional visitors to the area, such that there would be an increased demand on the police protection services of the CPD. Additionally, as development within PD9 and PD10 would consist of waterside features, police protection services would be provided by the HPD, which provides both landside and waterside law enforcement for the District. Therefore, there would not

be a need for new or physically altered CPD police protection facilities, and impacts would be less than significant.

Coast Guard Sector San Diego

Coast Guard Sector San Diego would respond to service demands in the proposed PMPU area in San Diego Bay, the shoreline, the coastline along the oceanfront, and offshore waters. The Coast Guard generally responds to issues related to hazardous materials and oil spills, homeland security issues, marine vehicles incidents, and search and rescue cases. These types of issues generally are not directly tied to the type of visitor-serving services that would be increasing in the proposed PMPU area, such as hotels, recreational facilities, and commercial uses. The increase in visitors to the waterfront due to the implementation of the proposed PMPU would not likely increase the service demands on Coast Guard Sector San Diego. However, the proposed PMPU could result in the addition of up to 485 slips in the Bay. While the adjacent cities would respond to incidents at the marinas and HPD would respond to incidents at the anchorages, increased recreational boat slips would increase the number of boats navigating in the Bay and/or the open ocean, which could result in an increase in marine vehicle incidents or search and rescue cases that the Coast Guard would need to respond to. Therefore, the implementation of the proposed PMPU could result in physical construction of new or expanded government facilities for the Coast Guard in order to maintain service ratios or response times which would result in significant environmental impacts. Impacts are considered significant (**Impact-PS-1**).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact regarding the need for new physical construction of new or expanded police protection facilities (**Impact-PS-1**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operation of Option 1 could result in an increase of visitors to the waterfront in PD3, which could result in an increased demand for SDPD police protection services. As discussed above, additional visitors could result in an increase in demand for police protection services and emergency response needs, particularly having to do with traffic, crime prevention, and crowd control. However, given that Option 1 would consist of a new Waterfront Destination Park, operations under this option would not result in an increase in demand for police protection services such that new or physically altered government facilities would be required that would result in physical impacts on the environment. Therefore, operations under Option 1 would result in a less-than-significant impact on police protection services.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact regarding the need for new physical construction of new or expanded police protection facilities (**Impact-PS-1**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operation of Option 2 could result in an increase of visitors to the waterfront in PD3, which could result in an increased demand for SDPD police protection services. As discussed above, additional visitors could result in an increase in demand for police protection services and emergency response needs, particularly having to do with traffic, crime prevention, and crowd control. However, given that Option 2 would consist of new park space, operations under this option would not result in an increase in demand for police protection services such that new or physically altered government facilities would be required that would result in physical impacts on the environment. Therefore, operations under Option 2 would result in a less-than-significant impact on police protection services.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact regarding the need for new physical construction of new or expanded police protection facilities (**Impact-PS-1**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operation of Option 3 could result in a substantial increase of visitors to the waterfront in PD3, which could result in an increased demand for SDPD police protection services. As discussed above, additional visitors could result in an increase in demand for police protection services and emergency response needs, particularly having to do with traffic, crime prevention, and crowd control. However, given that Option 2 would consist of new park space, operations under this option would not result in an increase in demand for police protection services such that new or physically altered government facilities would be required that would result in physical impacts on the environment. Therefore, operations under Option 3 would result in a less-than-significant impact on police protection services.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in physical impacts on the environment related to the construction of new or expanded government facilities in order to maintain service ratios for police protection services. Proposed PMPU policies require the District to provide public safety facilities on water and on land for the HPD to maintain public safety capabilities in alignment with the Port Act. Implementation of this policy would not result in adverse physical impacts, but could be beneficial by ensuring that adequate services are provided by HPD.

Impact Determination and Mitigation

Implementation of the proposed PMPU would potentially result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, or result in the need for new or physically altered government facilities, the construction of which could cause

significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services.

Significant Impacts

Impact-PS-1: Potential to Result in Substantial Adverse Physical Impacts from the Provision of New or Physically Altered Police Protection Facilities Associated with Operation of Future Development Projects Consistent with the Proposed PMPU. Implementation of the proposed PMPU, which includes development and operation of future projects (including visitor-serving facilities) would result in higher daily visitation to the proposed PMPU area, creating a greater demand for police services, which could require the expansion of, or new construction of, police facilities. The timing, duration, location, and extent of possible construction activities, as well as the certainty of the need for new or expanded police facilities are all unknown at this time. Potential impacts from the construction of new or expanded police facilities include construction-related air emissions, GHG emissions, noise and vibration, and energy use; disturbance of biological resources, cultural resources, tribal cultural resources, and/or contaminated soils; drainage and soil-related impacts; and impacts from the expanded connection of utilities to serve the new or expanded government facility. Operational impacts could include new or additional siren noise near sensitive receptors that may cause ambient noise levels to exceed hourly or 24-hour noise level standards of the City's Municipal Code and General Plan, increased VMT, and the associated effects on air quality, GHGs, and energy use.

Mitigation Measures

For **Impact-PS-1**:

MM-PS-1: Conduct Project-Specific Reviews of the Adequacy of Police Protection Services with the SDPD and Coast Guard to Determine if a New or Expanded Government Facility Will Be Required. During project-specific environmental review of future development projected under the proposed PMPU, the District shall require a site-specific study, consisting of coordination with the SDPD and/or Coast Guard (whichever agency[ies] provide police protection services to the area) regarding the future project, which shall include a written record of the results of the coordination, to determine whether the project would increase the demand on police services such that new or expanded facilities would be required to maintain adequate police services as determined by the SDPD and/or Coast Guard. Should it be determined that the future project would cause or contribute to the need for new or expanded police facilities, the District shall: (1) analyze the potential environmental effects of the construction and operation of the police facility in accordance with CEQA and ensure any impacts from the construction of any such facilities are mitigated to the extent feasible under the law; (2) confirm a CEQA document has been approved and certified for the new or expanded police facility and any associated mitigation required associated with its construction and operation; or (3) confirm a CEQA document is under preparation for construction and operation of the new or expanded police facility. If the District conducts the CEQA analysis as part of the project analysis, the analysis must consider all details about the needed police facility, including the known location, design, construction and operational details, and timing. In addition, the CEQA analysis must identify mitigation measures to reduce any significant impacts that could result from construction and operation of any new or expanded government facility. Mitigation measures as listed in the proposed PMPU's Mitigation Monitoring and Reporting Program

(MMRP) shall be considered where needed to avoid a significant impact. Importantly, this mitigation measure shall also be required for **Impact-C-PS-1** and shall be applicable to potential cumulative fire protection facility-related impacts and require coordination with SDFD and HPD consistent with the direction provided within this mitigation measure.

Significance After Mitigation

Mitigation measures detailed in the proposed PMPU's MMRP would be required where necessary, which would be determined by implementing **MM-PS-1**. To effectively implement **MM-PS-1**, a specific location (including surrounding land uses), project timing, and project design specifications for a future expansion or construction of new police facility must be known. However, because the specific location, timing, and design specifications for future expansion or construction of new police facilities are not known at this time, it would be speculative to conclude that impacts would be less than significant. Moreover, because the police facility may be located outside of the District's jurisdiction, the District would have no authority to require and enforce mitigation measures to lessen any significant impacts. Therefore, it is probable that the future construction of any new or expanded police facilities would potentially result in significant and unavoidable environmental impacts. **Impact-PS-1** would remain significant and unavoidable after implementation of **MM-PS-1**.

Threshold 3: Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for public schools?

Impact Analysis

Construction

The PMPU does not propose or allow for any residential development, as such development is not allowed on District Tidelands under the Port Act. As such, there would not be new permanent residents in the District's jurisdiction that would directly increase demand on schools. Construction of future development projects could occur throughout the planning horizon of the proposed PMPU (i.e., 2050). Construction workers are anticipated to come from the San Diego region (see also Section 4.11, *Population and Housing*); it is not anticipated workers would move to the area to work on development projects associated with the implementation of the proposed PMPU any more than under existing conditions because construction projects would be intermittent and dependent on local economic cycles, similar to existing conditions. Thus, the proposed PMPU would not result in an increase in the population due to construction workers that would result in an increased demand on school services. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses.

Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the need for new or expanded school facilities.

Construction associated with Option 1 would likely rely heavily on construction workers from the San Diego region. It is not anticipated workers would move to the area to meet the demand for construction workers; thus, Option 1 would not result in an increase in population due to construction that would result in an increased demand on public school services. Impacts would be less than significant. Therefore, construction under Option 1 would not result in any additional or more severe impacts related to school facilities than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the need for new or expanded school facilities.

Construction associated with Option 2 would likely rely heavily on construction workers from the San Diego region. It is not anticipated workers would move to the area to meet the demand for construction workers; thus, Option 2 would not result in an increase in population due to construction that would result in an increased demand on public school services. Impacts would be less than significant. Therefore, construction under Option 2 would not result in any additional or more severe impacts related to school facilities than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the need for new or expanded school facilities.

Construction of future development associated with Option 3 would likely rely heavily on construction workers from the San Diego region. It is not anticipated workers would move to the area to meet the demand for construction workers; thus, Option 3 would not result in an increase in population due to construction that would result in an increased demand on public school services. Impacts would be less than significant. Therefore, construction under Option 3 would not result in any additional or more severe impacts related to school facilities than buildout of the proposed PMPU without Option 3.

Operation

The operation of future development projects allowed under the proposed PMPU would not include residential development, which is not allowed under the Port Act. As such, there would not be new permanent residents in the District's jurisdiction that would increase demand on public school services. Future permanent employment opportunities in the proposed PMPU area would include

jobs in the hospitality, retail, industrial, and commercial sectors, consistent with existing employment opportunities within the Port. The service industry-related jobs generated from the commercial and recreational development within the proposed PMPU area are anticipated to be filled by the existing workforce in the San Diego region and would not be considered the cause for relocation to the San Diego region (see also Section 4.11). Thus, the additional jobs generated by development associated with the implementation of the proposed PMPU are not expected to result in additional workers moving from other areas in the country to the San Diego region in order to fill the new jobs. Therefore, the proposed PMPU would not result in an increase in the student population of public schools in the vicinity of the proposed PMPU area. In addition, new development occurring in the portions of the PMPU area falling within the SDUSD and Coronado Unified School District boundaries would be required to contribute to school impact fees for those schools districts, which would offset the demand created by any potential new students resulting from the additional jobs. Operation of the future development projects allowed under the proposed PMPU would not result in physical impacts on the environment related to the construction of new or altered public school facilities in order to maintain service ratios. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the need for new or expanded school facilities.

Implementation of Option 1 would not include residential development or other uses that would generate population growth in the San Diego region. Thus, Option 1 would not be the cause of population growth in the region and would not increase demand on schools such that new facilities would be required. Impacts would be less than significant. Therefore, operation under Option 1 would not result in any additional or more severe impacts related to school facilities than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the need for new or expanded school facilities.

Implementation of Option 2 would not include residential development or other uses that would generate population growth in the San Diego region. Thus, Option 2 would not be the cause of population growth in the region and would not increase demand on schools such that new facilities would be required. Impacts would be less than significant. Therefore, operation under Option 2 would not result in any additional or more severe impacts related to school facilities than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the need for new or expanded school facilities.

Implementation of Option 3 would not include residential development or other uses that would generate population growth in the San Diego region. Thus, Option 3 would not be the cause of population growth in the region and would not increase demand on schools such that new facilities would be required. Impacts would be less than significant. Therefore, operation under Option 3 would not result in any additional or more severe impacts related to school facilities than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

There are no proposed PMPU Element policies that would result in physical impacts on the environment related to the construction of new or expanded government facilities in order to maintain service ratios for public school services.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result in significant environmental impacts due to the construction of new or physically altered government facilities in order to maintain acceptable service ratios for public school services. Impacts would be less than significant.

Threshold 4: Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?

Impact Analysis

The proposed PMPU designates land throughout the proposed PMPU area for park space under the Recreation Open Space designation, which is defined as land areas primarily for visitor-serving, public open spaces that provide public access, public views, activating features, or access to coastal areas. This designation includes parks, recreational facilities, golf courses, and associated facilities and is complementary to the recreational berthing, conversation/intertidal, and open bay/water use designations. Because future development projects under the proposed PMPU would be located entirely on District Tidelands, it would be subject to the provisions listed within the proposed PMPU, but would not be required to meet any service ratios or performance objectives for parks per the Quimby Act, the City of San Diego, Civic San Diego, the City of Imperial Beach, or the City of Coronado.

Whereas cities or counties have land use plans that generally include residential uses and, therefore, often adopt a ratio of a certain amount of park land to each resident or a similar metric, the Port does not contain any residential land uses, nor does the proposed PMPU propose any residential uses. Rather the District's mission is to "protect the Tidelands Trust resources by providing economic vitality and community benefit through a balanced approach to the maritime industry, tourism, **water and land recreation**, environmental stewardship and public safety" (emphasis

added). As water and land recreation is a specific part of the District's mission, the District has a significant amount of recreational and park space within its jurisdiction. For example, there are 22 parks on District Tidelands, representing a large area under its jurisdiction relative to cities or counties. However, the provision and maintenance of parks is consistent with its responsibilities under the Port Act and CCA.

Although the District does not apply specific performance standards or service ratios for park space, the proposed PMPU would implement planning and development requirements enforced by the California Coastal Commission, including Chapter 3, Articles 2 and 3, of the CCA, which include policies that require future appealable projects to provide public access and recreational opportunities. Specifically, sections from Chapter 3 of the CCA requiring or encouraging development of, or requiring protection of, public access and recreational resources along the coast include Sections 30211, 30212, 30213, 30220, 30221, 30222, 30223, and 30224. In addition, Sections 30240 and 30253(e) require that any development occurring adjacent to park and recreation areas be sited and designed to prevent impacts that would significantly degrade those areas and be compatible with the continuance of those recreation areas and protection of areas with unique characteristics that are popular destination points for recreational use.

The Water and Land Use Element of the proposed PMPU establishes goals and policies regarding public recreation, as listed in Section 4.12.4.3, and as stated in WLU Policy 4.1.1, the proposed PMPU stipulates that there shall be no net loss of acreage designated as Recreation Open Space in a subdistrict or in a planning district if no subdistrict exists. Future improvements identified in the proposed PMPU could involve reconfiguration of Shelter Island Drive, Harbor Island Drive, and Harbor Drive, which would allow for the expansion of landside Recreation Open Space in PD1, PD2, and PD3. The proposed PMPU also provides for the introduction of activating features within these expanded Recreation Open Space areas. Furthermore, the proposed PMPU would develop activating features within Dunes Park in PD8 and would expand Grand Caribe Shoreline Park within PD9. An analysis of potential impacts of the proposed PMPU on recreational facilities is provided under Thresholds 5 and 6 below.

Construction

The PMPU proposes to designate a total of 273.65 acres for Recreation Open Space uses, which would be an increase of 14.03 acres over existing conditions. Future development projects under the Recreation Open Space designation allowed under the proposed PMPU could include active and passive park space in each of the planning districts, including waterfront promenades, bike paths, parks, and piers. Potential impacts associated with the construction of park facilities, including active and passive park space, are analyzed throughout the applicable sections of this PEIR (specifically, Sections 4.1 through 4.15). Examples of the potential impacts from the construction of new or expanded park space include construction-related air emissions, noise and vibration, and energy use from the use of construction equipment, vehicles, and building materials. Moreover, depending on the location of a new or expanded facility, impacts may also include disturbance of biological resources, cultural resources, tribal cultural resources, paleontological resources, and/or hazardous materials. As discussed throughout Sections 4.1 through 4.15, mitigation measures have been identified for significant impacts associated with the construction of parks that could be developed under the proposed PMPU. To the extent feasible, the identified mitigation measures would reduce impacts to less than significant. Construction specific to future park projects would not result in any additional significant impacts beyond those already identified throughout this

PEIR. However, because not all impacts associated with construction activities can be mitigated to less-than-significant levels, construction-related impacts related to new parks would be significant (**Impact-PS-2**) and would remain significant and unavoidable after implementation of **MM-AQ-2** through **MM-AQ-8**, **MM-BIO-2** and **MM-BIO-5**, **MM-CUL-1** through **MM-CUL-3**, **MM-GEO-1**, **MM-GHG-2**, **MM-NOI-1** through **MM-NOI-5**, and **MM-HAZ-1** and **MM-HAZ-2**.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Navy Pier at Foot of Navy Pier

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a significant and unavoidable impact related to the need for new or expanded park facilities (**Impact-PS-2**). This significant impact would still occur within PD3 under Option 1 as a result of the same potentially significant impacts related to construction activities.

Option 1 proposes 3.98 more acres of park land designated as Recreation Open Space than are proposed in the proposed PMPU. Improvements associated with Option 1 would primarily include passive park uses, such as sidewalks, benches, and lawns. Potential impacts associated with construction of a Waterfront Destination Park for Option 1 are analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15), and mitigation measures have been identified for significant impacts. Construction of the future park project proposed in Option 1 would not result in any additional significant impacts beyond those already identified throughout this PEIR. Therefore, construction under Option 1 would result in significant and unavoidable impacts but would not result in any additional or more severe impacts related to park facilities than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a significant and unavoidable impact related to the need for new or expanded park facilities (**Impact-PS-2**). This significant impact would still occur within PD3 under Option 2 as a result of the same potentially significant impacts related to construction activities.

Option 2 would propose 7.35 more acres of area designated as Recreation Open Space than are proposed in the proposed PMPU. Improvements associated with Option 2 would primarily include passive park uses, such as sidewalks, benches, and lawns. Potential impacts associated with construction of Option 2 are analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15), and mitigation measures have been identified for significant impacts. Construction of Option 2 would not result in any additional significant impacts beyond those already identified throughout this PEIR. Therefore, construction under Option 2 would be

significant and unavoidable but would not result in any additional or more severe impacts related to park facilities than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a significant and unavoidable impact related to the need for new or expanded park facilities (**Impact-PS-2**). This significant impact would still occur within PD3 under Option 2 as a result of the same potentially significant impacts related to construction activities.

Option 3 would propose 8.08 more acres of the area designated as Recreation Open Space than are proposed under the proposed PMPU. As such, implementation of Option 3 would have a beneficial impact on parks because it would increase the amount of park land and open space that presently exists or would exist under the proposed PMPU. Improvements associated with Option 3 would primarily include passive park uses, such as sidewalks, benches, and lawns. Potential impacts associated with construction of Option 3 are analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15), and mitigation measures have been identified for significant impacts. Construction of Option 3 would not result in any additional significant impacts beyond those already identified throughout this PEIR. Therefore, construction under Option 3 would be significant and unavoidable but would not result in any additional or more severe impacts related to park facilities than buildout of the proposed PMPU without Option 3.

Operation

The PMPU proposes to designate a total of 273.65 acres for Recreation Open Space uses, which would be an increase of 14.03 acres over existing conditions. The PMPU proposes the expansion of landside Recreation Open Space in PD1, PD2, PD3, and PD9, and would provide activating features in recreational areas throughout the proposed PMPU area. Implementation of the proposed PMPU could result in new users of park space in the proposed PMPU area that would increase demand on existing park space and create a need for new or expanded park facilities if sufficient park space were not available. However, the proposed PMPU is consistent with the CCA requirements noted above of maintaining access to the coast and providing coastal access for waterside recreation from the nearest public roadway to the shoreline. In addition to designating land throughout the proposed PMPU area for Recreation Open Spaces uses, the PMPU identifies public realm development standards for each planning district that require future development to provide walkways to offer physical access to the waterfront or for waterfront development to provide a continuous waterside promenade. Additionally, PMPU policies, including WLU Policies 4.1.1 through 4.2.2, would require the District to maintain existing, or increase the amount of, active and passive park space within the proposed PMPU area as well as increasing public access to recreational amenities for a diverse set of users. The proposed PMPU would require retention of existing, and could also increase, Recreation Open Space within the PMPU area, and would be consistent with CCA requirements, and is not subject to any other performance objectives. However, implementation of the proposed PMPU could involve operation of new or expanded parks, and potential impacts associated with the operation of new or expanded parks are analyzed throughout the applicable sections of this PEIR (specifically Sections 4.1 through 4.15). Examples of the potential impacts from the operation of new or expanded parks include impacts related to air quality emissions, biological resources, and GHG emissions. As discussed throughout this PEIR, mitigation measures have been

identified for significant impacts associated with the operation of recreational facilities that could be developed under the proposed PMPU, which would reduce impacts. However, because not all impacts associated with operational activities can be mitigated to less-than-significant levels, operation-related impacts related to the provision of new recreational facilities would be significant (**Impact-PS-3**) and would remain significant and unavoidable after implementation of **MM-AQ-9**, through **MM-AQ-12**; **MM-BIO-8** and **MM-BIO-9**; and **MM-GHG-1** and **MM-GHG-2**.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Navy Pier at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to the need for new or expanded park facilities (**Impact-PS-3**).

Option 1 proposes 3.98 more acres of park land designated as Recreation Open Space than are proposed in the proposed PMPU. Operation of Option 1 would increase visitors to the proposed PMPU area, which could increase demand on existing park space. However, the proposed PMPU is consistent with the CCA requirements of maintaining access to the coast and providing coastal access from the nearest public roadway to the shoreline. Additionally, Option 1 would involve increasing the amount of active and passive park space within the proposed PMPU area as well as increasing public access to recreational amenities for a diverse set of users by providing a new Waterfront Destination Park. Therefore, implementation of Option 1 would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks. Impacts would be significant and unavoidable. However, operations under Option 1 would not result in any additional or more severe impacts related to the need for new or expanded park facilities than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a significant impact related to the need for new or expanded park facilities (**Impact-PS-3**).

Option 2 would propose 7.35 more acres of area designated as Recreation Open Space than are proposed in the proposed PMPU. Operation of Option 2 would increase visitors to the proposed PMPU area, which could increase demand on existing park space. However, the proposed PMPU is consistent with the CCA requirements of maintaining access to the coast and providing coastal access from the nearest public roadway to the shoreline. Additionally, Option 2 would involve increasing the amount of active and passive park space within the proposed PMPU area as well as increasing public access to recreational amenities for a diverse set of users. Therefore, implementation of Option 2 would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which

could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks. Impacts would be significant and unavoidable. However, operations under Option 2 would not result in any additional or more severe impacts related to the need for new or expanded park facilities than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a significant impact related to the need for new or expanded park facilities (**Impact-PS-3**).

Option 3 would propose 8.08 more acres of the area designated as Recreation Open Space than are proposed under the proposed PMPU. Operation of Option 3 would increase visitors to the proposed PMPU area, which could increase demand on existing park space. However, the proposed PMPU is consistent with the CCA requirements of maintaining access to the coast and providing coastal access from the nearest public roadway to the shoreline. Additionally, Option 3 would involve increasing the amount of active and passive park space within the proposed PMPU area as well as increasing public access to recreational amenities for a diverse set of users. Therefore, implementation of Option 3 would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks. Impacts would be significant and unavoidable. However, operations under Option 3 would not result in any additional or more severe impacts related to the need for new or expanded park facilities than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in physical impacts on the environment related to the construction of new or expanded park facilities. Proposed PMPU policies identified in Section 4.12.4.3, including those identified under WLU Goal 4 (preserve and enliven the public realm), establish the District's commitment to the provision of publicly accessible Recreation Open Spaces throughout the proposed PMPU area and require the District and permittees of coastal-enhancing development to maintain existing and enhance active and passive recreation and open space within the proposed PMPU area as well as increase public access to recreational amenities for a diverse set of users. For example, WLU Policy 4.1.1 stipulates that there shall be no net loss of acreage designated as Recreation Open Space in any subdistrict or planning district, if no subdistrict exists, and WLU Policy 4.1.4 requires any accessways and recreation facilities to be maintained for public use. Implementation of these policies would not result in adverse physical impacts, but could be beneficial by ensuring that adequate park and recreational resources are provided.

Impact Determination and Mitigation

Implementation of the proposed PMPU would potentially result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, or result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks.

Significant Impacts

Impact-PS-2: Potential to Result in Substantial Adverse Physical Impacts from the Construction of New or Physically Altered Parks Implemented Under the Proposed PMPU.

Implementation of the proposed PMPU would include construction of new or expanded parks. Potential impacts from the construction of new or expanded parks include construction-related air emissions (**Impact-AQ-2**), biological resources (**Impact-BIO-2** and **Impact-BIO-5**), cultural resources (**Impact-CUL-1** and **Impact-CUL-2**), tribal cultural resources (**Impact-CUL-3**), paleontological resources (**Impact-GEO-1**), noise and vibration (**Impact-NOI-1** through **Impact-NOI-5**), and/or contaminated soils (**Impact-HAZ-1** and **Impact-HAZ-2**).

Impact-PS-3: Potential to Result in Substantial Adverse Physical Impacts from the Operation of New or Physically Altered Parks Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include new or expanded parks. Potential impacts from the operation of such new or expanded parks include operation-related air emissions (**Impact-AQ-9** through **Impact-AQ-12**), biological resources (**Impact-BIO-8** and **Impact-BIO-9**), and greenhouse gas emissions (**Impact-GHG-1** and **Impact-GHG-2**).

Mitigation Measures

For **Impact-PS-2**:

Implement **MM-AQ-2** through **MM-AQ-8**, as described in Section 4.2, *Air Quality and Health Risk*.

Implement **MM-BIO-2** and **MM-BIO-5**, as described in Section 4.3, *Biological Resources*.

Implement **MM-CUL-1** through **MM-CUL-3**, as described in Section 4.4, *Cultural Resources and Tribal Cultural Resources*.

Implement **MM-GEO-1**, as described in Section 4.5, *Geology and Soils*.

Implement **MM-GHG-2**, as described in Section 4.6, *Greenhouse Gas Emissions and Energy*.

Implement **MM-NOI-1** through **MM-NOI-5**, as described in Section 4.10, *Noise and Vibration*.

Implement **MM-HAZ-1** and **MM-HAZ-2**, as described in Section 4.7, *Hazards and Hazardous Materials*.

For **Impact-PS-3**:

Implement **MM-AQ-9** through **MM-AQ-12**, as described in Section 4.2.

Implement **MM-BIO-8** and **MM-BIO-9**, as described in Section 4.3.

Implement **MM-GHG-1** and **MM-GHG-2**, as described in Section 4.6.

Significance After Mitigation

For the reasons discussed in Sections 4.3, 4.6, and 4.7, implementation of **MM-BIO-2**, **MM-BIO-5**, **MM-GEO-1**, **MM-GHG-2**, **MM-HAZ-1**, and **MM-HAZ-2** would reduce impacts associated with construction activities related to biological resources, paleontological resources, GHG emissions and energy, and hazards and hazardous materials to less-than-significant levels. However, as discussed in Sections 4.2, 4.4, and 4.10, construction impacts related to air quality, cultural resources, and

noise would remain significant and unavoidable after implementation of **MM-AQ-2** through **MM-AQ-8**, **MM-CUL-1** through **MM-CUL-3**, and **MM-NOI-1** through **MM-NOI-5**. Therefore, **Impact-PS-2** is significant and unavoidable.

For the reasons discussed in Sections 4.3 and 4.6, implementation of **MM-BIO-8** and **MM-BIO-9** would reduce **Impact-BIO-8** and **Impact-BIO-9**, to less-than-significant levels and **MM-AQ-9** through **MM-AQ-12** and **MM-GHG-1** and **MM-GHG-2** would reduce **Impact-GHG-1** to less-than-significant levels. However, impacts related to air quality (**Impact-AQ-3** and **Impact-AQ-5**) would remain significant and unavoidable. Therefore, **Impact-PS-3** is significant and unavoidable.

Threshold 5: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?

Impact Analysis

The analysis below discusses the potential for future development allowed under the proposed PMPU to increase the use of existing recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.

Under the proposed PMPU, the amount of berthing for recreational boats could increase by 75 anchorages (moorings) and 485 recreational berthing slips. In addition, land designated for Recreation Open Space uses would total 273.65 acres, which would be an increase of 14.03 acres over existing conditions. Potential landside development identified in the proposed PMPU would include reconfiguring Shelter Island Drive, Harbor Island Drive, and Harbor Drive, which would allow for the expansion of landside Recreation Open Space in PD1, PD2, and PD3. Within PD1 and PD2, the reconfiguration of Shelter Island Drive and Harbor Island Drive would allow for expanded waterside promenades, a series of garden spaces, amenity zones, and additional activating features. Within PD3, the reconfiguration of Harbor Drive would allow for the creation of Recreation Open Space along the west side of North Harbor Drive, including a series of garden spaces that are linked through pathways, as well as up to 16 activating features, 9 of which may be pavilions. Furthermore, the proposed PMPU would develop activating features within Dunes Park in PD8 and would expand Grand Caribe Shoreline Park within PD9. The Recreation Open Space designation allows for a variety of recreational features for visitors in the proposed PMPU area, which may include anchorage areas, watercraft launch ramps, public docking, restaurants, overnight accommodations, retail facilities, sportfishing facilities, aquatic centers, attractions, boat rental operations, golf courses, museums, parks, plazas, performance venues, beach areas, recreational vehicle and camping areas, yacht clubs, and activating features such as shade structures, interactive activities, performances or other entertainment, education, games or play, exercise, or art (see Table 3.1.5 of the proposed PMPU). Development under the proposed PMPU would also include facilities that are intrinsically lower cost or no cost, which may include, but are not limited to, public recreational opportunities such as active and passive parks, open space, gardens, promenades, walkways, and bikeways/bike paths, wayfinding signage, seating, bicycle racks, step down areas to allow the public to touch the water, and other enhancements to public access areas.

The proposed PMPU would also expand transit opportunities in the PMPU area through the bayfront circulator and mobility hubs, which would allow visitors to move about more easily within

Tidelands. Furthermore, the District would coordinate with other agencies that have transportation authority to explore opportunities to expand accessible transit service to Tidelands (M Policy 1.1.9)

Construction

As discussed above, the proposed PMPU identifies an expansion of Recreation Open Space uses throughout the proposed PMPU area. Please see Chapter 3 for the proposed acreage of Recreation Open Space for each planning district. Because these uses are part of the project, the impacts of constructing and operating these new Recreation Open Space areas have been considered throughout this PEIR, and impacts and mitigation measures have been identified where necessary. Construction activities within the proposed PMPU area would increase the number of construction workers in the area who may make use of the existing parks throughout the proposed PMPU area. Although it is reasonable to assume construction workers may take their lunch breaks in parks adjacent to construction sites within the proposed PMPU area, it is not expected that they would use existing neighborhood or regional parks or other recreational facilities to such a degree and for such a duration of time that there would be a substantial physical deterioration of the existing facilities. As a result, project construction would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of these facilities would occur or be accelerated. In addition, it is possible that existing parks would be temporarily closed to the public during the construction of planned development within the proposed PMPU area. However, these impacts would be temporary, and implementation of the proposed PMPU would ultimately increase the amount of land available for recreation within Tidelands, as detailed in Chapter 3 of this PEIR. As such, construction indirectly associated with the proposed PMPU would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of these facilities would occur or be accelerated. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Navy Pier at Foot of Navy Pier

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the physical deterioration of existing recreational facilities.

Option 1 would result in slightly more Commercial Recreation and Recreation Open Space (1.49 and 3.98 acres, respectively) than proposed in the proposed PMPU. Construction activities associated with Option 1 would increase the number of construction workers in the area who may make use of the existing parks throughout the proposed PMPU area. Although it is reasonable to assume construction workers may take their lunch breaks in parks adjacent to construction sites within the proposed PMPU area, it is not expected that they would use existing neighborhood or regional parks or other recreational facilities to such a degree and for

such a duration of time that there would be a substantial physical deterioration of the existing facilities. As a result, construction of Option 1 would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of these facilities would occur or be accelerated. Impacts would be less than significant. Therefore, construction under Option 1 would not result in any additional or more severe impacts related to related to the physical deterioration of existing recreational facilities than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the physical deterioration of existing recreational facilities.

Option 2 would result in slightly more Recreation Open Space (7.35 acres) and slightly less Commercial Recreation (-3.34 acres) than proposed in the proposed PMPU. Construction activities associated with Option 2 would increase the number of construction workers in the area who may make use of the existing parks throughout the proposed PMPU area. Although it is reasonable to assume construction workers may take their lunch breaks in parks adjacent to construction sites within the proposed PMPU area, it is not expected that they would use existing neighborhood or regional parks or other recreational facilities to such a degree and for such a duration of time that there would be a substantial physical deterioration of the existing facilities. As a result, construction of Option 2 would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of these facilities would occur or be accelerated. Impacts would be less than significant. Therefore, construction under Option 2 would not result in any additional or more severe impacts related to related to the physical deterioration of existing recreational facilities than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to the physical deterioration of existing recreational facilities.

Option 3 would result in slightly more Recreation Open Space (8.08 acres) and slightly less Commercial Recreation (-0.84 acres) than proposed in the proposed PMPU. Construction activities associated with Option 3 would increase the number of construction workers in the area who may make use of the existing parks throughout the proposed PMPU area. Although it is reasonable to assume construction workers may take their lunch breaks in parks adjacent to construction sites within the proposed PMPU area, it is not expected that they would use existing neighborhood or regional parks or other recreational facilities to such a degree and for such a duration of time that there would be a substantial physical deterioration of the existing facilities. As a result, construction of Option 3 would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of these facilities would occur or be accelerated. Impacts would be less than significant. Therefore, construction under Option 3 would not result in any additional or more severe impacts related to related to the physical deterioration of existing recreational facilities than buildout of the proposed PMPU without Option 3.

Operation

Future development under the proposed PMPU—including up to 3,910 hotel rooms, 162,000 square feet of meeting space, and 339,489 square feet of retail and restaurant space—would result in increased use of existing recreational facilities. Given the number of visitors that could occur under the proposed PMPU, increased use of existing recreational facilities would also occur. However, future development under the proposed PMPU would also increase the amount and accessibility of recreational facilities and features within the proposed PMPU area by 14.03 acres. The provision of these additional recreational facilities would help offset any additional demand placed on existing recreational facilities from increased visitors to the proposed PMPU area. In addition, the District currently manages 22 parks and miles of walking and biking trails along the waterfront to make up approximately 259.62 acres of Recreation Open Space within the District Tidelands. Many of these parks do not have a quantifiable capacity and depend upon activities that can vary on a day-to-day basis. If certain facilities are being used, individuals may elect to participate in ongoing activities or choose alternate activities in the proposed PMPU area. As such, the impact of increased use of the surrounding parks would be dispersed, and usage would not result in substantial physical deterioration of these facilities. Moreover, the District currently conducts routine maintenance of its existing park and recreational facilities and has a regular maintenance program that would repair or replace deteriorating facilities on an ongoing basis. The District would continue to maintain any new recreational facilities developed under the proposed PMPU. Therefore, the proposed PMPU would not result in the substantial or accelerated deterioration of these amenities, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact regarding the potential deterioration of existing recreational facilities.

Option 1 would increase the number of recreational facilities available to accommodate new visitors to the proposed PMPU area, which would help offset any additional demand placed on existing recreational facilities from increased visitors. As such, implementation of Option 1 would have a beneficial impact on recreation because it would increase the number of recreational facilities that presently exists or would exist under the proposed PMPU. Therefore, implementation of Option 1 would not cause an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Impacts would be less than significant, and Option 1 would not result in any additional or more severe impacts than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact regarding the potential deterioration of existing recreational facilities.

Option 2 would increase the number of recreational facilities available to accommodate new visitors to the proposed PMPU area, which would help offset any additional demand placed on existing recreational facilities from increased visitors. As such, implementation of Option 2 would have a beneficial impact on recreation because it would increase the number of recreational facilities that presently exists or would exist under the proposed PMPU. Therefore, implementation of Option 2 would not cause an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Impacts would be less than significant, and Option 2 would not result in any additional or more severe impacts than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact regarding the potential deterioration of existing recreational facilities.

Option 3 would increase the number of recreational facilities available to accommodate new visitors to the proposed PMPU area, which would help offset any additional demand placed on existing recreational facilities from increased visitors. As such, implementation of Option 3 would have a beneficial impact on recreation because it would increase the number of recreational facilities that presently exists or would exist under the proposed PMPU. Therefore, implementation of Option 3 would not cause an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Impacts would be less than significant, and Option 3 would not result in any additional or more severe impacts than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Proposed PMPU policies require the District to maintain existing or increase the amount of active and passive recreation and open space within the proposed PMPU area as well as increase public access to recreational amenities for a diverse set of users. Implementation of these policies would not result in adverse physical impacts, but could be beneficial by ensuring that adequate park and recreational resources are provided.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result in an increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility could occur or be accelerated, which could result in physical impacts on the environment. Impacts are less than significant.

Threshold 6: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact Analysis

Construction

Implementation of the proposed PMPU could include construction of new recreational facilities throughout the proposed PMPU area. As indicated in Table 3.1.5 of the proposed PMPU, allowable uses under the Recreation Open Space designation include new anchorage moorings, watercraft launch ramps, public docking, aquatic centers, attractions, boat rental operations, golf courses, museums, parks, plazas, performance venues, beach areas, recreational vehicle and camping areas, yacht clubs, and activating features such as shade structures, interactive activities, performances or other entertainment, education, games or play, exercise, or art. Because recreational facilities are one of the types of future development that could occur under the proposed PMPU, the potential impacts associated with the construction of new or expanded recreational facilities are analyzed throughout the applicable sections of this PEIR (specifically Sections 4.1 through 4.15). Examples of the potential impacts from the construction of new or expanded recreational facilities would involve both waterside and landside activities, and would include construction-related air emissions, noise and vibration, and energy use from the use of construction equipment, vehicles, and building materials. Moreover, depending on the location of a new or expanded facility, impacts may also include disturbance of biological resources, cultural resources, tribal cultural resources, paleontological resources, and/or hazardous materials. As discussed throughout this PEIR, mitigation measures have been identified for significant impacts associated with the construction of recreational facilities that could be developed under the proposed PMPU, which would reduce impacts. Construction of new or expanded recreational facilities would not result in any additional significant impacts beyond those already identified throughout this PEIR. However, because not all impacts associated with construction activities can be mitigated to less-than-significant levels, construction-related impacts related to the provision of new recreational facilities would be significant (**Impact-REC-1**) and would remain significant and unavoidable after implementation of **MM-AQ-2** through **MM-AQ-8**; **MM-BIO-2** and **MM-BIO-5**; **MM-CUL-1** through **MM-CUL-3**; **MM-GHG-2**; **MM-HAZ-1** and **MM-HAZ-2**; **MM-NOI-1** through **MM-NOI-5**; and **MM-WQ-1** through **MM-WQ-7**.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant and unavoidable impact regarding the construction of new recreational facilities **(Impact-REC-1)**.

Construction activities associated with a new Waterfront Destination Park under Option 1 would include primarily ground-disturbing activities. Because Option 1 consists of new recreational facilities, and Option 1 has been analyzed throughout this PEIR, the potential impacts associated with the construction of recreational facilities for Option 1 have also been analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15). Construction of Option 1 would not result in any additional impacts not already identified in this PEIR, and impacts would be significant and unavoidable. Therefore, construction activities under Option 1 would not result in any additional or more severe impacts related to recreational facilities than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant and unavoidable impact regarding the construction of new recreational facilities **(Impact-REC-1)**.

Construction activities associated with the expanded Lane Field Setback Park under Option 2 would include primarily ground-disturbing activities. Because Option 2 consists of new recreational facilities, and Option 2 has been analyzed throughout this PEIR, the potential impacts associated with the construction of recreational facilities for Option 2 have also been analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15). Construction of Option 2 would not result in any additional impacts not already identified in this PEIR, and impacts would be significant and unavoidable. Therefore, construction activities under Option 2 would not result in any additional or more severe impacts related to recreational facilities than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant and unavoidable impact regarding the construction of new recreational facilities **(Impact-REC-1)**.

Construction activities associated with the new park space that could be developed under Option 3 would include primarily ground-disturbing activities. Because Option 3 consists of new recreational facilities, and Option 3 has been analyzed throughout this PEIR, the potential impacts associated with the construction of recreational facilities for Option 3 have also been analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15). Construction of Option 3 would not result in any additional impacts not already identified in this PEIR and impacts would be significant and unavoidable. Therefore, construction activities under Option 3 would not result in any additional or more severe impacts related to recreational facilities than buildout of the proposed PMPU without Option 3.

Operation

As described above, future development under the proposed PMPU would provide a variety of recreational features for visitors in the Tidelands, which, as identified in Table 3.1.5 of the proposed PMPU, may include anchorage areas, watercraft launch ramps, sportfishing facilities, aquatic centers, attractions, boat rental operations, golf courses, museums, parks, plazas, performance venues, beach areas, recreational vehicle and camping areas, yacht clubs, and activating features such as shade structures, interactive activities, performances or other entertainment, education, games or play, exercise, or art. Future development under the proposed PMPU would also include facilities that are intrinsically lower cost or no cost, which may include, but are not limited to, public recreational opportunities such as active and passive parks, open space, gardens, promenades, walkways, and bikeways/bike paths, wayfinding signage, seating, bicycle racks and other enhancements to public access areas. Potential impacts associated with the operation of new or expanded recreational facilities are analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15). Examples of the potential impacts from the operation of new or expanded recreational facilities include impacts related to air quality emissions, biological resources, GHG emissions, and water quality. As discussed throughout this PEIR, mitigation measures have been identified for significant impacts associated with the operation of recreational facilities that could be developed under the proposed PMPU, which would reduce impacts. However, because not all impacts associated with operational activities can be mitigated to less-than-significant levels, operation-related impacts related to the provision of new recreational facilities would be significant (**Impact-REC-2**) and would remain significant and unavoidable after implementation of **MM-AQ-9**, through **MM-AQ-12**; **MM-BIO-8** and **MM-BIO-9**; **MM-GHG-1** and **MM-GHG-2**; and **MM-WQ-8**.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact regarding the operation of new recreational facilities (**Impact-REC-2**).

Operational activities associated with a new Waterfront Destination Park under Option 1 could include primarily passive park use such as walking or sitting on benches, or an occasional event, such as a concert. Potential impacts associated with the operation of recreational facilities are analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15). Operation of Option 1 would not result in any additional impacts not already identified in this PEIR, and impacts would be significant and unavoidable. Therefore, operations under Option 1 would not result in any additional or more severe impacts related to recreational facilities than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact regarding the operation of new recreational facilities (**Impact-REC-2**).

Operational activities associated with the expanded Lane Field Setback Park under Option 2 could include primarily passive park use such as walking or sitting on benches, or an occasional event, such as a concert. Potential impacts associated with the operation of recreational facilities are analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15). Operation of Option 2 would not result in any additional impacts not already identified in this PEIR, and impacts would be significant and unavoidable. Therefore, operations under Option 2 would not result in any additional or more severe impacts related to recreational facilities than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact associated with the operation of new recreational facilities (**Impact-REC-2**).

Operational activities associated with new park space that could be developed under Option 3 could include primarily passive park use such as walking or sitting on benches, or an occasional event, such as a concert. Potential impacts associated with the operation of recreational facilities are analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15). Operation of Option 3 would not result in any additional impacts not already identified in this PEIR, and impacts would be significant and unavoidable. Therefore, operations under Option 3 would not result in any additional or more severe impacts related to recreational facilities than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. Potential impacts associated with development of recreational facilities under the proposed PMPU are analyzed throughout the applicable sections of this PEIR (Sections 4.1 through 4.15).

Impact Determination and Mitigation

Implementation of the proposed PMPU would include recreational facilities or require the construction or expansion of recreational facilities, which would have an adverse physical effect on the environment. Impacts are potentially significant.

Significant Impacts

Impact-REC-1: Potential to Result in Substantial Adverse Physical Impacts from the Construction of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include construction of new or expanded recreational facilities. Potential impacts from the construction of new or expanded recreational facilities could involve construction-related air emissions (**Impact-AQ-2** and **Impact-AQ-4**);

biological resources (**Impact-BIO-2** and **Impact-BIO-5**), cultural resources (**Impact-CUL-1** and **Impact-CUL-2**), tribal cultural resources (**Impact-CUL-3**), paleontological resources (**Impact-GEO-1**), noise and vibration (**Impact-NOI-1** through **Impact-NOI-5**), contaminated soils (**Impact-HAZ-1** and **Impact-HAZ-2**), and water quality (**Impact-WQ-1**).

Impact-REC-2: Potential to Result in Substantial Adverse Physical Impacts from the Operation of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU.

Implementation of the proposed PMPU would include operation of new or expanded recreational facilities. Potential impacts from new or expanded recreational facilities could involve operation-related air emissions (**Impact-AQ-3** and **Impact-AQ-5**), biological resources (**Impact-BIO-8** and **Impact-BIO-9**), greenhouse gas emissions (**Impact-GHG-1**), and/or water quality (**Impact-WQ-2**).

Mitigation Measures

For **Impact-REC-1**:

Implement **MM-AQ-2** through **MM-AQ-9**, as described in Section 4.2.

Implement **MM-BIO-2** and **MM-BIO-5**, as described in Section 4.3.

Implement **MM-CUL-1** through **MM-CUL-3**, as described in Section 4.4.

Implement **MM-GEO-1**, as described in Section 4.5.

Implement **MM-GHG-2**, as described in Section 4.6.

Implement **MM-HAZ-1** and **MM-HAZ-2**, as described in Section 4.7.

Implement **MM-NOI-1** through **MM-NOI-5**, as described in Section 4.10.

Implement **MM-WQ-1** through **MM-WQ-7**, as described in Section 4.8.

For **Impact-REC-2**:

Implement **MM-AQ-9**, through **MM-AQ-12**, as described in Section 4.2.

Implement **MM-BIO-8** and **MM-BIO-9**, as described in Section 4.3.

Implement **MM-GHG-1** and **MM-GHG-2**, as described in Section 4.6.

Implement **MM-WQ-8**, as described in Section 4.8.

Significance After Mitigation

For the reasons discussed in Sections 4.3, 4.6, and 4.7, implementation of **MM-BIO-2** and **MM-BIO-5** would reduce corresponding impacts to less-than-significant levels; implementation of **MM-AQ-2** through **MM-AQ-12** would reduce **Impact-AQ-2** and **Impact-QA-4** to less-than-significant levels; implementation of **MM-HAZ-1** and **MM-HAZ-2** would reduce **Impact-HAZ-1** through **Impact-HAZ-4** to less-than-significant levels; and implementation of **MM-NOI-1** would reduce **Impact-NOI-1** to a less-than-significant level. However, construction impacts related to air quality (**Impact-AQ-2** and **Impact-AQ-4**), cultural resources (**Impact-CUL-1** and **Impact-CUL-2**), tribal cultural resources (**Impact-CUL-3**), noise and vibration (**Impact-NOI-1** through **Impact-NOI-3**), and water quality (**Impact-WQ-1**) would remain significant and unavoidable for the reasons discussed in Sections 4.2, 4.4, 4.10, and 4.8, respectively). Therefore, **Impact-REC-1** is significant and unavoidable.

For the reasons discussed in Sections 4.3 and 4.6, implementation of **MM-BIO-8** and **MM-BIO-9** would reduce **Impact-BIO-8** and **Impact-BIO-9** to less-than-significant levels; and **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-12**, and **MM-GHG-1** and **MM-GHG-2** would reduce **Impact-GHG-1** to less-than-significant levels. However, impacts related to air quality (**Impact-AQ-3** and **Impact-AQ-6**) and water quality (**Impact-WQ-2**) would remain significant and unavoidable, for the reasons discussed in Sections 4.2 and 4.8, respectively. Therefore, **Impact-REC-2** is significant and unavoidable.

4.12.5 Cumulative Impact Analysis

Cumulative impacts on public services, including fire and emergency services, police protection, schools, and parks, as well as recreational facilities could result when past, present, and probable future projects combine to increase demand on public services and recreation facilities such that additional facilities must be constructed to maintain acceptable levels of service, and the construction of such facilities would result in a physical impact on the environment.

4.12.5.1 Geographic Scope

The analysis of cumulative impacts for public services and recreational facilities is based on the plan method, which considers growth associated with applicable land use plans and population growth projections. Therefore, the cumulative setting for public services and recreation includes all of the plans and programs listed in Table 2-2. The geographic scope for cumulative public services includes the service area of the fire and police departments that serve the adjacent communities, which includes the cities of Coronado, Imperial Beach, and San Diego, as well as San Diego Bay.

4.12.5.2 Cumulative Effects From Past, Present, and Probable Future Projects

As discussed in Section 4.12.2, fire services for the proposed PMPU area are provided by the San Diego HPD (Marine Firefighting and Emergency Response), the City of San Diego Fire Department, the City of Coronado Fire Department, and the City of Imperial Beach Fire Department. Police services are provided by the San Diego HPD, City of San Diego Police Department, City of Coronado Police Department, and the San Diego County Sheriff's Department – Imperial Beach Substation.

As discussed in Section 4.11, according to the Series 14 Regional Growth Forecast, SANDAG projects the region's population will grow by approximately 437,443 people by 2035 and nearly 694,958 people by 2050 (SANDAG 2019). The proposed updates to the regional, general, and community plans listed in Table 2-2 have increased, or would increase, the residential and non-residential development within the adjacent cities and the San Diego region. Within the District Tidelands, the Chula Vista Bayfront Master Plan would introduce residential and commercial uses, which would increase population and employment within the master plan area, but again, as noted in the EIR for the Chula Vista Bayfront Master Plan, these uses are also considered to be growth accommodating (District 2008). In addition, the National City Bayfront Projects and Plan Amendments would increase lodging opportunities and commercial space within the National City Bayfront planning district. The new development has and will continue to introduce new residential and employee populations and would increase visitors to the San Diego region, which would increase demand on

the region's public service providers and parks or recreational facilities and would result in the need for new or expanded facilities in order to maintain acceptable services ratios, response times, or other performance objectives. The construction of new or expanded facilities could result in significant environmental effects, and, therefore, impacts of past, present, and future projects on public services resources would be cumulatively significant.

4.12.5.3 Project Contribution

A project's contribution to a cumulative public service, park, or recreational facility impact is relative to the additional demand a project would place on a public services, park, or recreational resource for which a cumulatively considerable impact has been identified. The proposed PMPU does not have a residential component and, therefore, would not add an incremental contribution to cumulative school impacts, which generally occur from increases in permanent residents in an area.

Although the proposed PMPU would not have a significant impact on fire protection services and on police protection provided by HPD (as discussed under Threshold 1 above), the proposed PMPU's incremental contribution to the cumulatively significant impact on fire services and HPD police services would be considered cumulatively considerable (**Impact-C-PS-1**). Moreover, as determined under Threshold 2, the proposed PMPU's potential impacts on police protection services provided by SDPD and the Coast Guard are anticipated to be significant and unavoidable, and when combined with the significant cumulative impacts of past, present, and future development projects, the proposed PMPU's contribution on police protection facilities would be cumulatively considerable (**Impact-C-PS-1**). In addition, the proposed PMPU has the potential to introduce new or expanded park and recreational facilities within the proposed PMPU area, the construction and operation of which could result in impacts on the environment. Therefore, the proposed PMPU's contribution to demands on parks and recreational facilities would be cumulatively considerable (**Impact-C-PS-2**, **Impact-C-PS-3**, **Impact-C-REC-1**, and **Impact-C-REC-2**).

4.12.5.4 Cumulative Impact Determination and Mitigation

Potential cumulatively considerable impacts include:

Impact-C-PS-1: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Provision of New or Physically Altered Fire and Police Protection Facilities. Implementation of the proposed PMPU, when combined with past, present, and future development projects, would create a greater demand for fire and police protection services. This increased demand may require the construction of new or physically altered government facilities in order to maintain acceptable service ratios for the region. Because the timing, duration, location, and extent of any new or expanded fire and police facilities required to serve future development under the proposed PMPU are not known, construction of these facilities could result in physical impacts on the environment. In combination with other projects in or adjacent to the proposed PMPU area, construction of new or expanded fire and police protection facilities could result in a cumulatively considerable contribution to a significant cumulative impact related to fire and police protection.

Impact-C-PS-2: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Construction of New or Physically Altered Parks Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include construction of new or expanded parks. Potential impacts from the construction of new or expanded parks could involve construction-related air emissions (**Impact-AQ-2**), biological resources (**Impact-BIO-1** and **Impact-**

BIO-2), cultural resources (**Impact-CUL-1** and **Impact-CUL-2**), tribal cultural resources (**Impact-CUL-3**), energy use (**Impact-EN-1**), noise and vibration (**Impact-NOI-1** through **Impact-NOI-3**), and/or contaminated soils (**Impact-HAZ-1** through **Impact-HAZ-4**). In combination with other projects in or adjacent to the proposed PMPU area, construction of new or expanded parks could result in a cumulatively considerable contribution to a significant cumulative impact related to parks.

Impact-C-PS-3: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Operation of New or Physically Altered Parks Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include new or expanded parks. Potential impacts from the operation of new or expanded parks could involve operation-related air emissions (**Impact-AQ-3** and **Impact-AQ-6**), biological resources (**Impact-BIO-8**, **Impact-BIO-12**, and **Impact-BIO-14**), and greenhouse gas emissions (**Impact-GHG-1**). In combination with other projects in or adjacent to the proposed PMPU area, operation of new or expanded parks could result in a cumulatively considerable contribution to a significant cumulative impact related to parks.

Impact-C-REC-1: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Construction of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include new or expanded recreational facilities. Potential impacts from the construction of new or expanded recreational facilities could involve construction-related air emissions (**Impact-AQ-2** and **Impact-AQ-4**), biological resources (**Impact-BIO-1**, **Impact-BIO-2**, **Impact-BIO-3**, **Impact-BIO-4**, and **Impact-BIO-11**), cultural resources (**Impact-CUL-1** and **Impact-CUL-2**), tribal cultural resources (**Impact-CUL-3**), energy use (**Impact-EN-1**), noise and vibration (**Impact-NOI-1** through **Impact-NOI-3**), contaminated soils (**Impact-HAZ-1** through **Impact-HAZ-4**), and/or water quality (**Impact-WQ-1**). In combination with other projects in or adjacent to the proposed PMPU area, construction of new or expanded recreational facilities could result in a cumulatively considerable contribution to a significant cumulative impact related to recreational facilities.

Impact-C-REC-2: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Operation of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU. Implementation of the proposed PMPU would include operation of new or expanded recreational facilities. Potential impacts from new or expanded recreational facilities could involve operation-related air emissions (**Impact-AQ-3** and **Impact-AQ-6**), biological resources (**Impact-BIO-8**, **Impact-BIO-12**, and **Impact-BIO-14**), greenhouse gas emissions (**Impact-GHG-1**), and/or water quality (**Impact-WQ-2**). In combination with other projects in or adjacent to the proposed PMPU area, construction of new or expanded recreational facilities could result in a cumulatively considerable contribution to a significant cumulative impact related to recreational facilities.

Significance After Mitigation

Because specific location, timing, and design specifications for future expansion or construction of new fire, police, parks, or recreational facilities are not known at this time and may be within the jurisdiction and control of other agencies, the District cannot determine with certainty whether **MM-PS-1** would avoid or reduce potential environmental effects related to increasing fire and police protection services to meet future demand (see Threshold 2 above). Therefore, the proposed PMPU's contribution to cumulative fire and police protection impacts would be cumulatively considerable and **Impact-C-PS-1** would be considered cumulatively considerable and unavoidable.

In addition, mitigation measures identified to reduce impacts related to construction and operation of parks and recreational facilities (see Thresholds 4 and 6 above), would not reduce impacts to less-than-cumulatively considerable levels. Therefore, **Impact-C-PS-2**, **Impact-C-PS-3**, **Impact-C-REC-1**, and **Impact-C-REC-2** would be considered cumulatively considerable and unavoidable.

4.13.1 Overview

This section describes the existing conditions and laws and regulations for sea level rise. It also analyzes the proposed Port Master Plan's (PMPU's) potential to exacerbate the physical effects of sea level rise and be inconsistent with applicable sea level rise policies of the California Coastal Commission (CCC).

As discussed in Section 4.13.4.4, *Project Impacts and Mitigation Measures*, impacts associated with sea level rise would be less than significant and no mitigation measures are required

4.13.2 Existing Conditions

This section describes the effects of global climate change and its relation to sea level rise.

4.13.2.1 Effects of Global Climate Change

Climate change is a complex phenomenon that has the potential to alter local climatic patterns and meteorology. Although modeling indicates that climate change will result in sea level rise (both globally and regionally), as well as changes in temperature and rainfall, there remains uncertainty with regard to characterizing precise *local* climate characteristics and predicting precisely how various ecological and social systems will react to any changes in the existing climate at the local level. Regardless of this uncertainty, it is widely understood that substantial climate change is expected to occur in the future. Consequently, the entire San Diego region, including the proposed PMPU area, will be affected by changing climatic conditions.

Research efforts coordinated through the California Air Resources Board, the California Energy Commission, the California Natural Resources Agency, the University of California system, as well as many others continue to examine the specific changes to California's climate that will occur as the Earth's surface warms. Potential impacts include rising sea levels along the California coastline; extreme heat conditions; an increase in heat-related human deaths, infectious diseases, and respiratory problems caused by deteriorating air quality; reduced snow pack and streamflow in the Sierra Nevada, affecting winter recreation and water supplies; potential increase in the severity of winter storms, affecting peak stream flows and flooding; potential increase in frequency and intensity of wildfires; changes in growing season conditions that could affect California agriculture, causing variations in crop quality and yield; and changes in the distribution of plant and wildlife species due to changes in temperature, competition from colonizing species, changes in hydrologic cycles, changes in sea levels, and other climate-related effects.

With respect to the San Diego region, the *San Diego Summary Report* produced under California's Fourth Climate Change Assessment provides a summary of potential climate change impacts in the region (Kalansky et al. 2018), which include the following:

- **Increased temperatures:** The San Diego region will very likely experience hotter and drier days and more frequent, more intense, and longer heat waves. Average annual temperatures are expected to increase by 5–10°F by the end of the century. In coastal regions, marine layer clouds can help mitigate temperature increases. However, the impact of clouds requires further research because current climate models do not represent them well (Kalansky et al. 2018).
- **More volatile precipitation:** Rainfall will continue to be highly variable, with wet and dry extremes intensifying. Droughts are expected to occur more often and be more severe, while individual precipitation events are expected to intensify. At the seasonal level, the region is expected to see wetter winters and drier springs (Kalansky et al. 2018).
- **Greater wildfire risk:** Drier autumns are expected to increase the risk of wildfires, particularly the risk of large, catastrophic wildfires driven by Santa Ana wind events (Kalansky et al. 2018).
- **Impacts on human health:** Climate change is expected to exacerbate public health impacts. Specifically, more intense heat waves, warmer temperatures, and wildfires are expected to exacerbate heat-related illness, adverse health impacts from wildfire smoke, and vector-borne diseases. Sea level rise and flooding could affect coastal residents/businesses through direct effects, such as evacuations and damages to property or important community structures. Indirect effects include the possibility of pooled water, which could result in enhanced exposure to vector-borne diseases, or increased runoff, which could result in increased pollutants. Certain populations are particularly vulnerable to these health impacts, including those with preexisting or underlying health conditions, those with chronic illnesses (e.g., asthma), the very young, the elderly, and those without health insurance (Kalansky et al. 2018).
- **Reductions in fresh water:** Climate change is expected to reduce the San Diego region's imported and local water supplies and increase water demand. By mid-century, two of the major imported water supplies are expected to decline. State Water Project imports are expected to drop by 10 percent or more, while Colorado River imports are expected to drop by 10 to 45 percent. Meanwhile, demand is projected to increase by 30 percent by 2040 (Kalansky et al. 2018).
- **Rising sea levels and increased storm surge:** Projected sea level rise, coastal erosion, and increasing storm surges (i.e., a temporary rise in sea level due to atmospheric pressure during a storm) may cause fragile sea cliffs to collapse, shrink beaches, and destroy coastal property and structures and ecosystems. Along the San Diego County coast, sea levels are expected to rise by around 1 foot by mid-century and rise rapidly through the end of the century by around 3 feet. Higher sea levels, combined with high-tide events, are expected to lead to higher extreme water levels (Kalansky et al. 2018). More information on sea level rise projections for the Port of San Diego is provided below.
- **Impacts on habitats:** Climate change is a significant stressor to San Diego's natural lands, which are among the most biodiverse in the United States. Climate stressors—such as rising temperatures (both air and water), ocean acidification, a greater portion of rainfall falling as extreme precipitation, more frequent and intense droughts, and rising sea levels—may also stress habitats and native species, thereby harming biodiversity. For instance, as sea levels rise, wetlands migrate upstream and inland. However, in heavily urbanized areas such as San Diego, migration is limited by development, causing wetlands and the populations that rely on them to shrink (Kalansky et al. 2018).

Given the proposed PMPU area's location along the waterfront, sea level rise is the primary concern as an effect of climate change and is discussed in more detail below.

Sea Level Rise

Over the past century, mean global sea level has risen approximately 1.7 millimeters (mm) per year (about 0.07 inch per year) accelerating to a rate of 3.2 mm per year since 1993 (IPCC 2013). From 1906 to 2019, the tide gauge in San Diego Bay suggests a rise of approximately 2.2 mm per year (about 0.09 inch per year), approximately 29% higher than the global rate (NOAA 2018). In total, sea levels rose 0.72 foot in San Diego during the twentieth century (NOAA 2018).

A variety of factors impact local relative sea level rise (i.e., the sea level rise projections for a specific location rather than the global average sea level rise projections), including vertical land movement, ocean dynamics, and changes in the Earth's gravitational and rotational fields (NRC 2012). Through 2100, San Diego is projected to subside at a rate of 1.4 mm/year, and the glacial geostatic adjustment¹ is projected to cause local relative sea level to increase by 0.4 mm/year (NRC 2012). These values are factored into the Ocean Protection Council's sea level rise projections and thus the San Diego Unified Port District's (District's) 2019 *Sea Level Rise Vulnerability Assessment and Coastal Resilience Report*.

Governor Schwarzenegger's Executive Order S-13-08, issued in November of 2008, directed State agencies to plan for sea level rise and coastal impacts. In response to this, several iterations of sea level rise guidance have been developed to help State agencies incorporate sea level rise into project planning and decision-making. In late 2018, the CCC released sea level rise policy guidance (CCC 2018), which draws on sea level rise projections, guidance, and best available science from 2017 and 2018 Ocean Protection Council documents and provides recommendations for addressing sea level rise in local coastal programs and coastal development permits. The sea level rise projections for San Diego Bay from these documents are summarized in Table 4.13-1.

Table 4.13-1 provides a single range of sea level rise estimates for the years 2030 and 2050 and multiple ranges for the year 2100. This range demonstrates the increasing uncertainty associated with estimating sea level rise in the long term, particularly in the latter half of the twenty-first century. The contribution of thermal expansion (i.e., ocean water volume expanding as ocean water warms) and the melting of small glaciers to sea level rise is relatively well-researched, while the impacts of climate change on large ice sheets are less understood. In addition, there are multiple scenarios that represent how global society may evolve over the coming century in its use of fossil fuels, technology, population growth, etc. These scenarios are known as Representative Concentration Pathways (RCPs). RCP 2.6 represents a moderately warmer future where global radiative forcing is projected to increase by 2.6 watts per square meter (m^2) by 2100. RCP 8.5 represents a much hotter future, where global radiative forcing is projected to increase by 8.5 watts/ m^2 by 2100. The latter represents "business-as-usual," whereby unsubstantial efforts are made to reduce greenhouse gas emissions. Until mid-century there is limited difference in the RCP projections so they are consolidated into a single set of projections; however, for 2100, it is valuable

¹ The Earth's crust is still reaching a state of equilibrium after the melting of the glaciers at the end of the last ice age. This process is called glacial geostatic adjustment. Some locations that were compressed due to the huge weight of the ice are still rebounding, while areas that were near, but not covered with glaciers were pushed up during the ice age and are still subsiding.

to consider the separate ranges of sea level rise under the various RCPs. In general, sea level rise is projected to accelerate towards the second half of the century.

Table 4.13-1. San Diego Bay Probabilistic Sea Level Rise Projections in Feet (with Meters in Parentheses) Above 1991–2009 Mean Sea Level Baseline

Year	Median (50% exceedance probability)	Likely Range (67% probability sea level rise is between)	1-in-20 Chance (5% exceedance probability)	1-in-200 Chance (0.5% exceedance probability)	H++ Scenario (No associated probability)
2030	0.5 (0.15)	0.4–0.6 (0.12–0.18)	0.7 (0.21)	0.9 (0.27)	1.1 (0.33)
2050	0.9 (0.27)	0.7–1.2 (0.21–0.36)	1.4 (0.43)	2.0 (0.61)	2.8 (0.85)
2100 (RCP 2.6)	1.7 (0.52)	1.1–2.5 (0.34–0.76)	3.3 (1.01)	5.8 (1.77)	10.2 (3.11)
2100 (RCP 8.5)	2.6 (0.79)	1.8–3.6 (0.55–1.10)	4.5 (1.37)	7.0 (2.13)	10.2 (3.11)

Source: CCC 2018.

Projected sea level rise, as an effect of climate change, is expected to increase the geographic area and the frequency with which those areas experience coastal flooding along San Diego Bay and the open coast. Rising sea levels increase the frequency of flooding at *all levels*, from extreme to nuisance. For example, areas that used to experience monthly flooding may be permanently inundated, while areas that were flooded only during extreme storm surge events (e.g., the 50-year storm) may experience flooding on a regular basis. In summary, sea level rise is a concern for the future, particularly in combination with future storm surge events. A scenario with 100-year flood flows that coincides with high tides, taking into account sea level rise over a 50- or 100-year horizon, would dramatically increase the risk of flooding.

The District conducted a sea level rise vulnerability assessment and coastal resiliency report in accordance with Assembly Bill (AB) 691 to analyze potential effects from sea level rise and coastal flooding on the built environment and natural resources. Low lying built environment assets, such as boat launches and sewer lifts, are projected to experience inundation by 2030, and assets that provide public access and recreational opportunities become increasingly affected by potential inundation and storm surge by 2050. Critical infrastructure, such as roads, rail, and the stormwater system, could experience temporary coastal flooding from 100-year storm events by 2100. For natural environments, available area for salt marsh, beach/dune, and upland habitats declines as sea level rises. Significant financial effects are likely to come out of loss of transportation and other infrastructure, as well as from loss of ecosystem services (District 2019).

4.13.3 Laws, Regulations, Plans, and Policies

This section summarizes international, Federal, State, and local regulations and policies related to sea-level rise. These laws, regulations, and policies represent the current state of sea-level rise regulatory planning and guidance, although not all regulations and policies mentioned below are directly applicable to the proposed PMPU or the District.

4.13.3.1 Federal

There are no applicable Federal laws, regulations, or policies related to sea level rise and the proposed PMPU.

4.13.3.2 State

California has adopted statewide legislation and guidance addressing various aspects of sea level rise and climate change. Much of this establishes a broad framework for the State's long-term climate change adaptation program. The former and current governors of California have also issued several Executive Orders (EOs) related to the State's evolving climate change policy. Summaries of key policies, EOs, regulations, legislation, and guidance at the State level that are relevant to the proposed PMPU are provided below in chronological order. It should be noted that Senate Bill (SB) 379 requires the incorporation of climate adaptation and resiliency strategies into the safety element of city and county general plans on or before January 1, 2022. Because the District is not a city or county government, this regulation would not apply to the proposed PMPU or this Program Environmental Impact Report (PEIR). Although SB 379 does not apply to the District, the District has incorporated climate adaptation and resiliency strategies into the proposed PMPU.

California Coastal Act

The California Coastal Act (CCA or Coastal Act) of 1976 (Public Resources Code Sections 30000–30900) was enacted by the Legislature as a comprehensive scheme to govern land use planning for the entire coastal zone of California. The Coastal Act established the CCC to oversee future development along California's coastline. A combination of local land use planning procedures and enforcement to achieve maximum responsiveness to local conditions, accountability, and public accessibility are relied upon to insure conformity with the provisions of the act (Section 30004 (a) and (b)). Chapter 8, Article 3 of the CCA requires ports, including the Port of San Diego, to develop a Port Master Plan (PMP) by which to conduct project reviews and issue individual coastal development permits or exclusions within their jurisdictions. Individual PMPs require review and certification by the CCC for conformity with the Coastal Act, including any amendments to the certified PMP. Chapter 8 (Section 30715) also specifies which projects within a port are subject to Chapter 3 policies of the CCA, *Coastal Resources Planning and Management Policies*. Those policies provide guidance for public access to the coast, recreation, marine environment, land resources, development, and sea level rise.

With respect to coastal resources, sea level rise increases the risk of flooding, coastal erosion, and saltwater intrusion into freshwater supplies, including groundwater, which have the potential to threaten many of the resources that are integral to the California coast, including coastal development, coastal access and recreation, habitats (e.g., wetlands, coastal bluffs, dunes, and beaches), water quality and supply, cultural resources, community character, and scenic quality. (See Chapter 3 of the Coastal Act for more details on what constitutes a coastal resource, which include coastal habitats; coastal development; public access and recreation opportunities; cultural, archaeological, and paleontological resources; and scenic and visual qualities.)

Executive Order S-13-08 (2008)

EO S-13-08, signed by Governor Schwarzenegger in November 2008, required the Natural Resources Agency to request that the National Academy of Sciences convene an independent panel to complete the California Sea Level Rise Assessment Report that advises how California should plan for future sea level rise. The order also requires all State agencies planning construction projects in areas vulnerable to future sea level rise to consider a range of sea level rise scenarios for the years 2050 and 2100 for planning purposes. Additionally, EO S-13-08 required the California Natural Resources Agency to develop a State Climate Adaptation Strategy. In response to the order, the *California Climate Adaptation Strategy* (CNRA 2009) was released in 2009 and includes adaptation strategies focused on public health, ocean and coastal resources, water supply and flood protection, agriculture, forestry, biodiversity and habitat, and transportation and energy infrastructure. Furthermore, EO S-13-08 required the Governor's Office of Planning and Research to provide State land use planning guidance related to sea level rise and other climate change impacts.

Assembly Bill 691 – Proactively Planning for Sea Level Rise Impacts (2013)

AB 691 required that certain grantees of State lands, including the District, prepare and submit to the California State Lands Commission (CSLC), no later than July 1, 2019, an assessment of how the grantees propose to address sea level rise on Tidelands. The bill also states that addressing the impacts of sea level rise shall be among the management priorities of a local trustee. In accordance with AB 691, the assessment was completed and submitted to CSLC and includes the following:

- An assessment of the impact of sea level rise on granted public trust lands as described by certain documents.
- Maps showing the areas that may be affected by sea level rise in the years 2030, 2050, and 2100. These maps shall include the potential impacts of 100-year storm events. The District may rely on appropriate maps generated by other entities.
- An estimate of the financial cost of the impact of sea level rise on District public trust lands. The estimate shall consider, but is not limited to, the potential cost of repair of damage to and the value of lost use of improvements and land, and the anticipated cost to prevent or mitigate potential damage.
- A description of how the District proposes to protect and preserve natural and human-made resources and facilities located on, or proposed to be located on, trust lands and operated in connection with the use of the trust lands. The description shall include, but is not limited to, how wetlands restoration and habitat preservation would mitigate impacts of sea level rise.

The District's *Sea Level Rise Vulnerability Assessment and Coastal Resiliency Report* (AB 691 Report) informed the development of the proposed PMPU policies and the methodology used for this PEIR. The report is included as Appendix I of this PEIR.

Assembly Bill 2516 – Planning for Sea Level Rise Database (2014)

AB 2516 requires the Natural Resources Agency, in collaboration with the Ocean Protection Council, to create, update biannually, and post online a Planning for Sea Level Rise Database that describes the steps being taken throughout the state to prepare for, and adapt to, sea level rise. The bill requires various public agencies and private entities to provide sea level rise planning information, defined as studies, programs, modeling, mapping, cost-benefit analyses, vulnerability assessments,

adaptation, assessments, and local coastal programs that have been developed for the purposes of addressing or preparing for sea level rise, to the Natural Resources Agency and Ocean Protection Council for incorporation into the Planning for Sea Level Rise Database. The entities subject to AB 2516 include 13 State agencies, as well as all ports, airports, and electric and natural gas utilities within the coastal zone and San Francisco Bay Area. The District has been complying with AB 2516 and providing sea level rise planning information to the Natural Resources Agency.

Executive Order B-30-15 (2015)

EO B-30-15, signed by Governor Brown in April 2015, directed State agencies to integrate climate change into all planning and investment and account for current and future climate conditions in infrastructure investments. In addition, the Governor's Office of Planning and Research was directed to assemble a Technical Advisory Group to develop a guidance document for implementing the order. In response to the order, the Technical Advisory Group prepared *Planning and Investing for a Resilient California: A Guidebook for State Agencies* (OPR 2018), which provides high level guidance on future conditions and how State agencies should approach planning in light of those conditions. Furthermore, EO B-30-15 established a statewide greenhouse gas emissions reduction target of 40 percent below 1990 levels by 2030.

California State Lands Commission Strategic Plan (2021)

The CSLC Strategic Plan (2021–2025), adopted on February 23, 2021, contains strategic focus areas and goals designed to guide CSLC in managing and protecting the important natural resources on public lands within the State of California, including the Tidelands and submerged lands within the jurisdiction of the District. Strategies related to sea level rise include the following.

- Convene collaborative dialogues to evaluate the need for policies that:
 - a. Carefully examine and proposed nonrenewable extractive practices on State lands, for pursuing a just transition to renewables.
 - b. Identify the appropriate response to significant land-use changes that may adversely affect public and private uplands as sea levels rise and the Commission's jurisdiction increases.
 - c. Enhance understanding of the Public Trust to increase advocacy for its appropriate use and protection.
 - d. Support our grantees, lessees, tribal partners, stakeholders, and partners in their efforts to build thriveability and balance sustainability and equity with economic growth.

Assembly Bill 2800 (2016)

AB 2800 requires State agencies to consider current and future impacts of climate change when planning, designing, building, operating, maintaining, and investing in state infrastructure. The bill, by July 1, 2017 and until July 1, 2020, required the Natural Resources Agency to establish a Climate-Safe Infrastructure Working Group to examine how to integrate scientific data of projected climate change impacts into infrastructure planning, design, and implementation. AB 2800 required the Climate-Safe Infrastructure Working Group to provide specific recommendations to the California State Legislature and Strategic Growth Council by July 1, 2018. In accordance with AB 2800, the Climate-Safe Infrastructure Working Group prepared *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California* (CSIWG 2018), a report that summarizes the working group's

findings and provides recommendations to the State Legislature for creating climate-safe infrastructure.

California Ocean Protection Council – Rising Seas in California: An Update on Sea Level Rise (2017)

In April 2017, the Ocean Protection Council released *Rising Seas in California: An Update on Sea Level Rise* (Rising Seas Report), a report that synthesizes the current state of sea level rise science, including advances in modeling and improved understanding of the processes that could drive extreme global sea level rise as a result of ice loss from the Greenland and Antarctic ice sheets. The Rising Seas Report was prepared and peer-reviewed by experts in coastal processes, climate and sea level rise science, observational and modeling science, the science of extremes, and decision-making under uncertainty. The science provided in this report helped form the basis for the Ocean Protection Council’s updated sea level rise guidance, described further below.

California Ocean Protection Council – State of California Sea Level Rise Guidance (2018)

The California Ocean Protection Council released updated *State of California Sea Level Rise Guidance* in 2018 to reflect advances in sea level rise science. The 2018 update to the guidance was developed by the California Ocean Protection Council in coordination with the California Natural Resources Agency, Governor’s Office of Planning and Research, and the California Energy Commission, and relies primarily on the scientific findings from the Ocean Protection Council’s Rising Seas Report (described above). The updated guidance is intended to assist State agencies and local governments with incorporating sea level rise projections into their planning, permitting, investment, and other decisions in accordance with AB 691 and EO B-30-15. The State of California Sea Level Rise Guidance was initially released in 2010 and previously updated in 2013.

California Coastal Commission Sea Level Rise Policy Guidance (2018)

First adopted in 2015 by the CCC and updated in November 2018, the *Sea Level Rise Policy Guidance* provides a framework for addressing sea level rise in PMPs and Coastal Development Permits (CDPs). The guidance provides principles for addressing sea level rise in the coastal zone, an overview of the science behind sea level rise as well as a description of the potential consequences, and an outline of the steps for addressing sea level rise in PMPs or CDPs. The original 2015 guidance was amended in November 2018 based on updated sea level rise science in two new reports released by the Ocean Protection Council: the Rising Seas Report and State of California Sea Level Rise Guidance, described above.

Safeguarding California Plan: 2018 Update

The 2018 update to the *Safeguarding California Plan* (CNRA 2018) is a roadmap demonstrating how California is taking action to respond to climate change, including sea level rise, and lays out the next steps to achieve the State’s goals as well as how those objectives will be achieved. Over 1,000 ongoing actions and next steps, organized by 76 policy recommendations across 11 policy sectors, were developed through the scientific and policy expertise of staff from 38 State agencies. The plan describes overarching strategies recommended by the California Natural Resources Agency, and outlines ongoing actions and cost-effective and achievable next steps to make California more

resilient to climate change, including sea level rise. This roadmap serves as a transparent and accountable tool for the public to evaluate the State’s progress. It should be noted that the *Safeguarding California Plan* is not intended to serve as a prescriptive policy document or guidelines for non-State government entities. Rather, it is intended to provide a comprehensive suite of ongoing and needed adaptation actions, as well as principles and recommendations to guide and organize adaptation efforts, by State agencies.

Making California’s Coast Resilient to Sea Level Rise: Principles for Aligned State Action (2020)

A group of State agencies, including the Ocean Protection Council, California Coastal Commission, California State Lands Commission, and California Department of Transportation, adopted a set of Principles for Aligned State Action in spring 2020, which compiles principles developed and endorsed by State and regional agencies. These principles aim to scale-up coastal resiliency efforts in California through aligned strategies that create consistent and efficient decision-making and improve collaboration across partners. The principles, one of which includes consideration of establishing a minimum of 3.5 feet of sea level rise by 2050, as a sea level rise projection, are focused on six key issues: Best Available Science, Partnerships, Alignment, Communications, Local Support, and Coastal Resilience Projects. The 3.5 feet of sea level rise corresponds to a 2100 “likely” sea level rise scenario, but the State agencies recommend that planning for that value begin sooner. The principles are non-regulatory guidelines that are meant to be used in planning, policy setting, project development, and decision-making by State agencies, and they serve as a living document, to which additional formal endorsement of other principles can be added.

4.13.4 Project Impact Analysis

4.13.4.1 Methodology

The sea level rise analysis consists of a geospatial assessment of future sea level rise and storm surge projections compared to the various planning district elevations and proposed water and land use designations. The analysis reviews historic and projected future rates of sea level rise and utilizes the U.S. Geological Survey (USGS) Coastal Storm Modeling System (CoSMoS) 3.0 sea level rise mapping scenarios to determine potential areas of flooding and inundation. CoSMoS² is a collection of sea level rise inundation maps produced for the California coast by USGS. CoSMoS combines 0.25-meter (9.8-inch) sea level rise increments (from 0 to 2 meters and a single 5-meter scenario) and four different storm return periods (daily, annual, 20-year, 100-year) into a series of inundation maps and other technical resources. USGS presents these modelled data independent of any projected analysis timeframe (i.e., they do not indicate when any given sea level rise increment will occur). As such, interpretation is required to determine the potential timeframe at which the various sea level rise elevations will occur.

In compliance with AB 691, the District prepared the *Sea Level Rise Vulnerability Assessment and Coastal Resiliency Report* (AB 691 Report) (District 2019), presented it to the Board of Port Commissioners in June 2019, and then submitted to the CSLC. This report is provided as Appendix I

² https://www.usgs.gov/centers/pcm/science/coastal-storm-modeling-system-cosmos?qt-science_center_objects=0#qt-science_center_objects

of this PEIR. AB 691 requires local trustees of public trust lands to collaborate with its lessees, local, State, and Federal government agencies, and users of the granted public trust lands to address projected sea level rise. District staff, regional stakeholders, and subject matter experts from public agencies, non-profit groups, and private companies were engaged during the development of the AB 691 Report to gather information and learn from projected sea level rise and coastal experts. Stakeholders included the U.S. Navy, Federal, State, regional, and local government agencies, academia, environmental interest groups, District tenants, and the San Diego Port Tenants Association.

Beginning in the fall of 2017 and concluding in the winter of 2018, stakeholders provided technical feedback and recommendations for the District's projected sea level rise approach, including selection of sea level rise projections to be used in the vulnerability assessment, coastal flood modeling, and assets to be evaluated. Stakeholders also provided input on the vulnerability assessment, flood maps, and the projected sea level rise planning process. The stakeholder process led to a deeper understanding of sea level rise projections, asset management, and potential impacts. The stakeholder process included the formation of a Sea Level Rise Ad-Hoc Committee within the District's Environmental Advisory Committee (EAC). In addition to a select number of EAC members, representatives from the District's member cities and the CCC also participated in the Sea Level Rise Ad-Hoc Committee to advise the District throughout the development of the vulnerability assessment.

The proposed PMPU impact analysis aligns the 2030 and 2050, 5 percent probability of exceedance of sea level rise projections (or 95% probability that sea level rise will not exceed these projections) and the 50 percent probability exceedance for 2100 (RCP 8.5) from the Ocean Protection Council's Rising Seas Report (OPC 2017) and the District's AB 691 Report (District 2019) to the nearest CoSMoS mapping increment (Table 4.13-2). These projections are consistent with the sea level rise projections selected and analyzed in the District's AB 691 Report and are within 2 inches of the CCC's medium-high risk aversion scenario.

The following scenarios are included for disclosure purposes, including:

- **3.3 feet (1 meter) of sea level rise by 2050.** As discussed in Section 4.13.3.2, the CCC has adopted a principle that recommends a minimum consideration of 3.5 feet of sea level rise by 2050 or the use of best available science. The CCC does not plan to update its current Sea Level Rise Policy Guidance to incorporate specific projections (CCC 2020), which is why this scenario is only included for disclosure purposes.
- **4.5 feet and 7 feet of sea level rise by 2100.** Due to the increased uncertainty in the 2100 projections and the benefits of understanding the incremental impacts of sea level rise, the potential exposure under the 5 percent (4.5 feet) and the 0.5 percent (7 feet) probability exceedance projections for 2100 (RCP 8.5) are included for disclosure. The H++ scenario was not further analyzed due to the evolving nature of the science and the significant uncertainty associated with that scenario. In 2019, new science was published that reduces the likelihood of the H++ scenario (Edwards et al. 2019).

Table 4.13-2. Alignment of San Diego Bay Sea Level Rise Projections with the CoSMoS Mapping

Year	Probability Sea Level Rise Meets or Exceeds Projection	Sea Level Rise Projection (feet)	Closest CoSMoS Mapping Increment	Analysis Purpose
2030	1-in-20 Chance (5% probability)	0.7*	0.25 meter (0.82 foot)	Impact Analysis
2050	1-in-20 Chance (5% probability)	1.4*	0.5 meter (1.64 feet)	Impact Analysis
2050	Unknown	3.5	1 meter (3.3 feet)	For Disclosure Only
2100 (RCP 8.5)	Median (50% probability)	2.6*	0.75 meter (2.5 feet)	Impact Analysis
2100 (RCP 8.5)	1-in-20 Chance (5% probability)	4.5*	1.5 meters (4.92 feet)	For Disclosure Only
2100 (RCP 8.5)	1-in-200 Chance (0.5% probability)	7.0	2.0 meters (6.6 feet)	For Disclosure Only

Source: CCC 2018.

*Sea level rise (SLR) projections that were analyzed in the District's *Sea Level Rise Vulnerability Assessment & Coastal Resilience Report* (AB 691 Report at Appendix I to this PEIR)

For each CoSMoS mapping increment, both the daily inundation layers, as well as the 100-year storm layers are included in the analysis. Both the daily and 100-year storm elevations assume a mean high water tide (i.e., the average high tide elevation at the San Diego Bay tide gauge).³

The baseline analysis scenario for analysis is the CoSMoS zero-meter scenario. Zero meter of sea level rise from CoSMoS is approximately the 2010 mean high water level. This scenario is overlaid on the existing water and land use designation map to determine baseline exposure levels.

The sea level rise assessment was conducted geospatially by overlaying the CoSMoS projected inland extent of the future daily high tide and the 100-year storm surge (1% annual return probability) with the proposed water and land use designation map for each planning district. The impacts are reported as the acres of each water and land use designation that would be impacted under each sea level rise and storm surge scenario.

To understand what the acreages of flooded land could mean, the vulnerability of different future development types was qualitatively assessed. This approach is consistent with the CCC's Sea Level Rise Policy Guidance, which describes vulnerability as "a function of the character, magnitude, and rate of climate variation to which a system is *exposed*, as well as of non-climatic characteristics of the system, including its *sensitivity*, and its coping and *adaptive capacity*." Assessing risk adds the additional component of *consequences*. The sea level rise analysis includes these four components of vulnerability (exposure, sensitivity, adaptive capacity, and consequences):

- **Exposure:** This describes whether future development could be exposed to sea level rise, including increased flooding during storms.

³ The CoSMoS model is highly complex with many assumptions regarding wave formation, erosion, sediment transport, etc. More information on the model and its assumptions is available from the USGS's *CoSMoS v3.0 Phase 2 Southern California Bight: Summary of Methods*. Available at: <https://www.sciencebase.gov/catalog/item/57f1d4f3e4b0bc0bebfee139>.

- **Sensitivity:** This describes the degree to which future development may be affected by sea level rise. Sea level rise could result in direct harm to the future development or result in changing environmental conditions (e.g., geology, soil characteristics, hydrology, land cover and use) that could affect the development. Some types of development may be more sensitive than others. The analysis qualitatively rates the sensitivity of future types of development on this scale, which is consistent with the District’s AB 691 approach:
 - **Low:** If exposed, the future development or resource would suffer no or minor damage and can maintain functionality.
 - **High:** If exposed, the future development or resource would experience major damage or long-term service interruptions, requiring significant effort to restore/rebuild to original condition.
- **Adaptive Capacity:** This describes the degree to which future development can successfully adapt to sea level rise impacts, including flooding, inundation, and/or erosion, through methods such as elevation or relocation. For natural resources such as beaches, wetlands, and other coastal habitats, adaptive capacity may include room to migrate inland and potential for habitat creation. The analysis qualitatively rates the adaptive capacity of future types of development on this scale, which is consistent with the District’s AB 691 approach:
 - **Low:** The future development or resource has limited ability to adapt without substantial changes.
 - **High:** The future development or resource can easily be adapted or has the ability and conditions to adapt naturally.
- **Consequences:** This describes the implications of the physical damage to assets including changes to operations and services that may occur due to sea level rise impacts. Consequences can include disruptions of operations, safety threats to surroundings, increased pollution, loss of access to development, loss of habitats, and reduction of biological productivity and water quality.
 - **Low:** Sea level rise and storm surge damages would result in non-significant consequences to human health and sensitive resources.
 - **High:** Sea level rise and storm surge damages would result in significant consequences to human health and sensitive resources.

Rather than analyze each land use type individually for the sensitivity, adaptive capacity, and consequences, they have been grouped into broader categories of development types (e.g., natural habitat, park space, structures, infrastructure, open water, floating structures, underwater structures, fixed structures) with similar sea level rise consequences to avoid repetition and false precision at the plan level of analysis.

The proposed PMPU’s consistency with applicable sea level rise policies of the CCC 2018 Sea Level Rise Policy Guidance is evaluated qualitatively. A project is considered consistent with the provisions of these documents if it meets the general intent of increasing sea level rise resilience, in order to facilitate the achievement of adopted goals and does not impede attainment of those goals. As discussed in Section 4.9, *Land Use and Planning*, a given project need not be in perfect conformity with each and every planning policy or goals to be consistent with the proposed PMPU. A project would be consistent if it would further the objectives and not obstruct their attainment.

4.13.4.2 Thresholds of Significance

The California Environmental Quality Act (CEQA) does not direct agencies to analyze the environment's effects on a project but does require analysis when a project could exacerbate existing environmental hazards or conditions. As such, the analysis provided within this section focuses on the project's potential to exacerbate existing and projected future conditions associated with sea level rise. See Section 4.6, *Greenhouse Gas Emissions and Energy*, for the project's impacts associated with increasing greenhouse gas (GHG) emissions and their contribution to climate change and sea level rise. This section focuses on the proposed PMPU's potential to result in changes in the physical environment resulting from siting of future development and whether these changes may exacerbate the adverse physical effects associated with future sea-level rise.

The following significance criteria provide the basis for determining significance of sea level rise impacts from implementation of the proposed PMPU. The determination of whether a sea level rise impact would be significant is based on the thresholds described below and the professional judgment of the District as Lead Agency, based on the evidence in the administrative record.

Impacts are considered significant if the proposed PMPU would result in any of the following:

1. Exacerbate any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, associated with reasonably foreseeable future sea level rise and storm surge.
2. Result in an inconsistency with the applicable sea level rise policies of the CCC 2018 Sea Level Rise Policy Guidance adopted for the purpose of avoiding or mitigating an environmental effect from sea level rise.

To determine whether future development allowed under the proposed PMPU would exacerbate any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, associated with sea level rise and storm surge, the following methodology was used for each analysis scenario (i.e., 2030, 2050, and 2100).

- Development of proposed PMPU water and land uses within the geographic area exposed to a 0.7-foot sea level rise scenario (2030, 5% probability scenario) with a 100-year storm surge would be considered a significant impact if the development allowed under the proposed PMPU would exacerbate the physical effects associated with the rise of sea levels.
- Development of proposed PMPU water and land uses within the geographic area exposed to a 1.4-foot sea level rise scenario (2050, 5% probability scenario) with a 100-year storm surge would be considered a significant impact if the development allowed under the proposed PMPU would exacerbate the physical effects associated with the rise of sea levels.
- Development of proposed PMPU water and land uses within the geographic area exposed to a 2.6 feet sea level rise (2100 RCP 8.5, 50% probability scenario) with a 100-year storm surge would be considered a significant impact if the development allowed under the proposed PMPU would exacerbate the physical effects associated with the rise of sea levels.

4.13.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policies would have the potential to reduce or avoid impacts associated with the potential to exacerbate any existing and/or projected damage to the

environment, including existing structures, human health, and sensitive resources, in association with sea level rise and storm surge and are considered in the impact analysis that follows.

SR Policy 3.2.1 The District shall participate in research that supplements its knowledge of projected coastal climate impacts and potential strategies to adapt to these impacts.

SR Policy 3.2.2 The District shall encourage pilot and demonstration projects that provide effective and innovative sea level rise adaptation and coastal resiliency approaches.

SR Policy 3.2.3 The District shall create and periodically update a sea level rise adaptation plan that:

- a. Considers best available science and applicable regional, State, and Federal adaptation planning guidance;
- b. Builds upon previous analyses of coastal hazards that are caused or exacerbated by projected sea level rise;
- c. Provides recommendations for adapting structures and facilities, coastal access, recreational areas, coastal-dependent development, contaminated sites, and other infrastructure and coastal resources to projected sea level rise conditions,
- d. Explores the potential for nature-based sea level rise adaptation strategies;
- e. Identifies alternative opportunities or plans for adapting to coastal hazards such as but not limited to: balance or realignment of natural habitat and the built environment, softening hardened shoreline structures, restoring or enhancing submerged habitats for coastal resiliency, or replacing in-kind public recreation areas, accessways, and other Public Trust resources that could be lost due to inundation or damage associated with sea level rise;
- f. Establishes a monitoring protocol and requirements for evaluating sea level rise impacts on all Tidelands uses over time; and
- g. Establishes a schedule for performing future Tidelands' sea level rise vulnerability assessments.

SR Policy 3.3.1 Permittees shall submit a site-specific hazard report to the District using best available science and considers best practices as provided by Federal, State, or regional guidance on coastal resiliency.

At a minimum, the site-specific hazard report shall address anticipated coastal hazards over the anticipated life of the development, including, but not limited to inundation; flooding associated with storms of various return periods, including a 100-year storm; wave runup and overtopping; historic and projected future shoreline erosion; groundwater rise; saltwater intrusion; tsunamis; and changes to these hazards over time due to projected sea level rise at the site. The following requirements apply to the site-specific hazard analysis for the report:

- a. The analysis shall be conducted by a licensed engineer with experience in coastal processes and shall be submitted to the District for its review and approval.
- b. Using best available science and applicable regional, State, or Federal adaptation planning guidance documents, the analysis shall consider multiple sea level rise scenarios and projections associated with the anticipated life of the development and, when applicable, identify potential future impacts on on-site natural resources.

- c. The analysis shall identify threshold SLR amounts that could lead to impacts (e.g., the amount of SLR that could lead to overtopping of the proposed development).
- d. For development that does not meet the requirements that allow shoreline protective devices subject to SR Policy 3.3.3, SR Policy 3.3.6, or SR Policy 3.3.9, the hazard analysis shall be performed assuming no reliance upon future shoreline protective devices.
- e. If applicable, the report shall identify the coastal hazards that could trigger implementation of sea level rise adaptation strategies. If the development cannot fully minimize or avoid the impacts of coastal hazards for the anticipated life of the development, the report shall discuss possible adaptation responses to the hazards to reduce risk as feasible and mitigate impacts on coastal resources.
- f. As part of Coastal Act approval, the District shall review the report and require the development to implement the recommendations in the report and/or any other siting and design adaptation measures that the District determines are necessary to find that the development is consistent with the requirements of this Plan.

SR Policy 3.3.2 The District shall require permittees to site and design development to avoid impacts from coastal hazards from projected sea level rise considering the anticipated life of the development, where feasible.

- a. If coastal hazards cannot be completely avoided, the District shall require planning, designing, and implementation of adaptation strategies, that:
 - 1. Address the hazards over the anticipated life of the development;
 - 2. Protect coastal resources, public access, and recreational facilities, and
 - 3. Minimize risks to life and property to the maximum extent feasible.

SR Policy 3.3.3 Permittees of coastal-dependent port structures and supportive coastal related development that are essential to maritime functions, public safety, and security may implement shoreline protective devices or other adaptation strategies for the protection from, or accommodation of, coastal hazards.

SR Policy 3.3.4 The District and permittees shall prioritize implementation of nature based adaptation strategies for coastal resiliency as an alternative to the placement of shoreline protective devices, where feasible and applicable.

SR Policy 3.3.5 The District shall require new landside accessways and recreational facilities be sited and designed to the avoid impacts from coastal hazards and minimize environmental impacts while maximizing coastal access.

SR Policy 3.3.6 The District and permittees may implement shoreline protective devices or other adaptation strategies for protection from, or accommodation of, coastal hazards for existing landside accessways and recreational facilities where no adjacent in-kind alternative landside accessway or recreational facility exists on Tidelands.

SR Policy 3.3.7 If an existing landside accessway or recreational facility is deemed unsafe by the District because it has become permanently degraded by coastal hazards, the landside accessway or

recreational facility shall be retrofitted or relocated by the District or permittee to the extent feasible, such that safe continuous coastal access will be maintained.

SR Policy 3.3.8 To improve coastal access, the District encourages incorporation of step-down areas into an existing shoreline protective device that abuts a sandy beach.

SR Policy 3.3.9 Appealable development that is considered coastal-dependent, an existing structure, or a public beach vulnerable to erosion shall be allowed to construct, reconstruct, expand, repair and maintain, and/or replace a shoreline protective device.

SR Policy 3.3.10 When constructing, reconstructing, expanding, or replacing a shoreline protective device (per SR Policy 3.3.3, SR Policy 3.3.6, and SR Policy 3.3.9), the District shall require it be designed to:

- a. Minimize adverse impacts on local shoreline sand supply;
- b. Minimize impacts on recreation, habitat, scenic views, beach width, and other coastal resources;
- c. Encourage inland expansion of protective devices rather than further fill of coastal waters to minimize resource impacts; and
- d. Not substantially impair coastal access or other Public Trust uses.

SR Policy 3.3.11 Appealable development that does not qualify for protection per SR Policy 3.3.3, SR Policy 3.3.6, and SR Policy 3.3.9, shall avoid the need for shoreline protective devices to avoid coastal hazards over the anticipated life of the development that may result from projected sea level rise.

SR Policy 3.3.12 The District shall allow the repair and maintenance of existing, legally established shoreline protective devices that protect uses that do not qualify for protection (per policies SR Policy 3.3.3, SR Policy 3.3.6, and SR Policy 3.3.9) provided that:

- a. Unless destroyed by natural disaster, replacement of a shoreline protection device that meets the definition of major development shall not be considered repair and maintenance;
- b. Repair and maintenance do not lead to an expansion of the shoreline protective device; and
- c. Applications for repair and maintenance of an existing, legally established shoreline protective device shall include a reassessment of the need for the device, the need for the repair and maintenance of the device, and the potential for the device's removal based on projected coastal hazards that may result from sea level rise.

SR Policy 3.3.13 Appealable development shall be removed and the affected area restored to its previous or natural condition, or that appealable development shall apply additional coastal hazard adaptation strategies (such as those identified through the site-specific hazard report developed for SR Policy 3.3.1, if a report was developed for that site), if the development becomes subject to coastal hazards to the point that:

- a. The District has ordered that the structures are no longer allowed to be occupied due to coastal hazards;
- b. The District has identified that critical services to the site (e.g., utilities, roads) can no longer be maintained; or

- c. The development requires new and/or augmented shoreline protective devices that are not in accordance with policies SR Policy 3.3.4, SR Policy 3.3.6, and SR Policy 3.3.9.

SR Policy 3.3.14 The District and permittees may use fill of coastal waters to facilitate sea level rise adaptation of coastal habitats in San Diego Bay, subject to requirements in Section 30233 of the Coastal Act.

SR Policy 3.3.15 When considering coastal hazard adaptation strategies, non-appealable development shall be located, designed, and constructed so as to minimize substantial adverse environmental impacts and provide for other uses consistent with the Public Trust.

4.13.4.4 Project Impacts and Mitigation Measures

Threshold 1: Exacerbate any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, associated with reasonably foreseeable future sea level rise and storm surge?

Impact Analysis

The District's AB 691 report (Appendix I) provides an analysis of the vulnerability of existing assets and natural infrastructure to sea level rise, but it does not address future development. As mentioned above, the sea level rise scenarios used in this PEIR align with those studied in the AB 691 report to provide continuity to the District's sea level rise analysis and planning. Sea level rise can be highly site-specific, and even within a single parcel, flood exposure can vary significantly. Because the exact location of future development consistent with the proposed PMPU is unknown, this PEIR analyzes the potentially exposed acreage of each water and land use designation and qualitatively discusses the potential implications of the flooding under various sea-level rise scenarios, including those with and without 100-year storm surge. Table 4.13-3 shows the acreage of PMPU water and land use designations potentially exposed to flooding at various sea level rise increments, while Table 4.13-4 shows the acreage of water and land use designations exposed to flooding under sea level rise and a 100-year storm. The displayed acreage values are incremental rather than cumulative. For example, under 0.25 meter of sea level rise in average conditions, 4.0 acres of Commercial Recreation could be exposed to flooding; under 0.5 meter of sea level rise, an additional 4.3 acres would be exposed, for a total of 8.3 acres exposed. Following the tables is a qualitative summary of the sensitivity and adaptive capacity of future development that could occur under the proposed PMPU water and land uses.

The water uses are inherently exposed to sea level rise and coastal flooding, thus explaining their significant existing exposure values. Additional exposure of water uses to higher levels of sea level rise are likely within the modeling margin of error rather than an accurate representation of increased risks. For example, the Conservation/Intertidal water use designation is shown to be highly exposed under the existing exposure and 0.25 meter of sea level rise scenarios due to its low-lying location along the shoreline and because areas designated as Conservation/Intertidal are already frequently submerged.

Table 4.13-3. Acreage Potentially Exposed to Sea Level Rise Scenarios Under Average Daily Conditions (i.e., with no storm event)

Water and Land Use Designation	Existing Exposure	Sea Level Rise Scenarios (meters)						Total Exposed	Net Change	Not Exposed
		0.25 ¹	0.5 ²	0.75 ³	1.0 ⁴	1.5 ⁴	2.0 ⁴			
Water Use Designations										
Anchorage	152.7	0.0	0.0	0.0	0.0	0.0	0.0	152.8	0.1	0.0
Commercial Fishing Berthing	29.4	0.1	0.1	0.1	0.1	0.1	0.0	29.8	0.4	0.0
Conservation/Intertidal	1,525.1	14.0	8.7	5.4	2.3	3.6	5.7	1,564.7	39.6	5.3
Industrial and Deep Water Berthing	294.9	0.3	0.2	0.2	0.1	0.2	0.0	296.0	1.1	0.0
Marine Services Berthing	15.0	0.1	0.1	0.1	0.1	0.1	0.0	15.5	0.5	0.0
Navigation Corridor	375.4	0.3	0.3	0.4	0.5	0.5	0.0	377.3	1.9	0.0
Open Bay/Water	739.3	3.8	1.9	1.4	1.2	1.9	1.7	751.1	11.8	1.4
Recreational Berthing	381.7	1.4	1.1	1.2	1.0	1.5	1.0	388.9	7.2	1.3
Sportfishing Berthing	10.9	0.1	0.0	0.0	0.0	0.1	0.0	11.1	0.2	0.0
Land Use Designation										
Commercial Fishing	1.8	0.0	0.0	0.1	2.1	2.8	0.3	7.2	5.4	0.0
Commercial Recreation	7.9	4.0	4.4	12.9	19.1	101.4	107.3	257.0	249.1	211.1
Conservation Open Space	4.1	5.4	3.9	3.8	5.2	5.6	10.1	38.1	34	30.1
Institutional/Roadway	0.2	0.5	0.9	0.7	0.4	1.8	1.4	5.9	5.7	1.2
Marine Sales and Services	0.1	0.0	0.0	1.0	0.9	4.7	1.6	8.5	8.4	0.2
Marine Terminal	3.1	0.2	0.2	0.3	0.4	86.9	76.5	167.5	164.4	66.0
Maritime Services and Industrial	6.3	0.2	0.3	0.5	2.5	74.4	93.8	178.0	171.7	157.8
Recreation Open Space	17.0	2.7	4.5	9.2	13.7	117.5	120.1	284.9	267.9	132.9
Sportfishing	0.0	0.0	0.0	0.0	0.2	3.6	0.8	4.5	4.5	0.0
Visitor-Serving Marine Terminal	12.1	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0	0.0

¹ Correlates to the 2030 5% probability scenario.

² Correlates to the 2050 5% probability scenario.

³ Correlates to the 2100 RCP 8.5 50% probability scenario.

⁴ Shown for informational purposes only.

Some land uses that are directly in or over water (e.g., Commercial Fishing) are also not well represented in the modeling, which only covers areas landward of the shoreline. For example, piers or docks that are not landward of the shoreline are often not accounted for in the CoSMoS model; thus, these features may show flooding and inundation under future sea level rise scenarios even if in reality, they may not be as impacted. Similarly, those land uses that are right at the water's edge (e.g., Recreation Open Space, Commercial Recreation) with gradual slopes down to the water's edge show some existing exposure due to discrepancies in where the "water" starts between the sea level rise modeling and the land use maps.

As shown in Table 4.13-3, almost all land use designations (except for Commercial Fishing, Marine Sales and Service, Sportfishing, and the Visitor-Serving Marine Terminal) would be exposed to some degree of flooding under the 0.25 meter scenario (approximately 2030) of sea level rise during average daily conditions without a storm event. Additionally, Commercial Recreation, Conservation Open Space, Marine Terminal, Maritime Services and Industrial, and Recreation Open Space land use designations are likely to experience a substantial number of acres exposed to flooding under higher levels of sea level rise, particularly starting at the 1.5 meter scenario (approximately 2100) of sea level rise. As such, sea level rise would expose future development within the proposed PMPU area to inundation and flooding under future sea level rise scenarios during average daily conditions without a storm event.

The extent of flooding under various sea level rise scenarios is shown in Figures 4.13-1 through 4.13-8. The figures do not include a transparent flood layer over the existing areas of water because doing so impedes the ability of the reader to orient themselves relative to established landmarks. The modeling used to produce Table 4.13-3 and Table 4.13-4 do represent existing areas of water as "flooded" under all sea level rise scenarios.

Table 4.13-4 shows the acreage of water and land use designations exposed to flooding under sea level rise and a 100-year storm. During a 100-year storm, additional acres of PMPU water and land use designations are expected to be exposed to temporary flooding compared to average conditions. Therefore, sea level rise combined with a 100-year storm event would cause temporary flooding of future development of the proposed water and land use designations within the proposed PMPU area.

The extent of flooding during future 100-year storms under various sea level rise scenarios is shown in Figures 4.13-9 to 4.13-16.

The tables and maps provide information on exposure to sea level rise and storm surge, while the discussion that follows qualitatively describes sensitivities, adaptive capacity, and consequences of sea level rise and storm surge. Rather than looking at each water and land use designation individually, they have been grouped into broader categories of use types with similar sea level rise and storm surge impacts (i.e., natural habitat, park space, structures, infrastructure, open water, floating structures, underwater structures, fixed structures) to avoid repetition and false precision at this plan level of analysis.

Figure 4.13-1. Permanent Inundation Under Sea Level Rise for Shelter Island (PD1)



Figure 4.13-2. Permanent Inundation Under Sea Level Rise for Harbor Island (PD2)

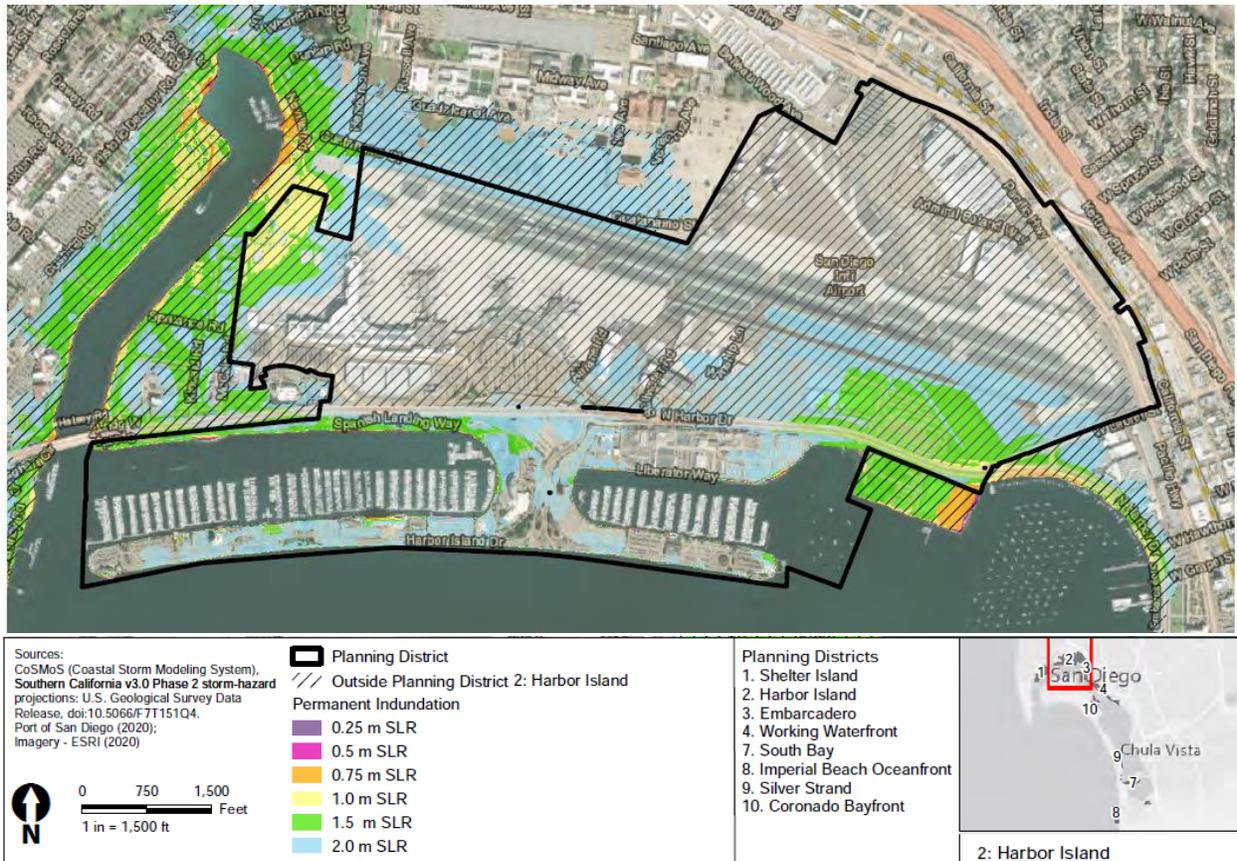


Figure 4.13-3. Permanent Inundation Under Sea Level Rise for Embarcadero (PD3)

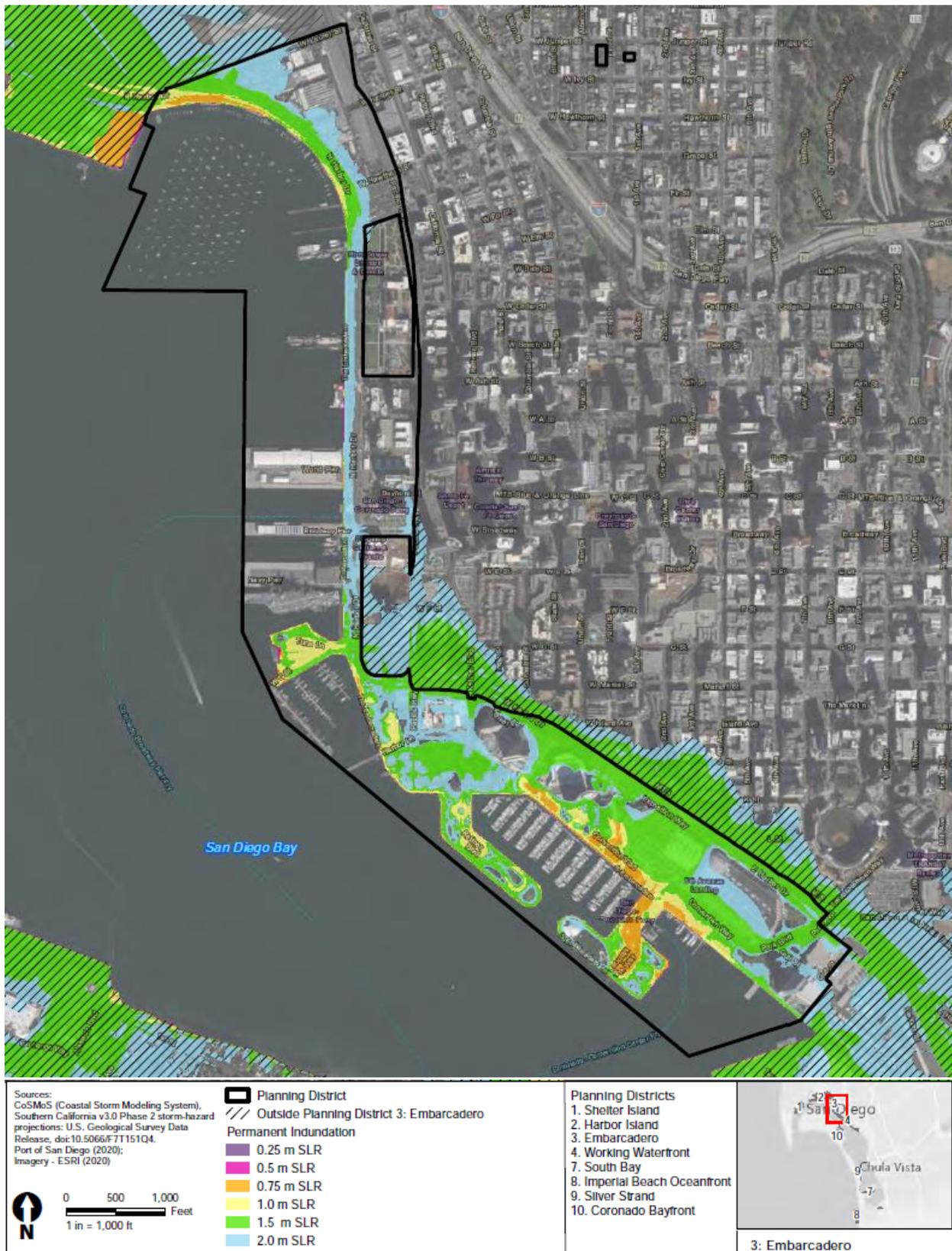


Figure 4.13-4. Permanent Inundation Under Sea Level Rise for Working Waterfront (PD4)

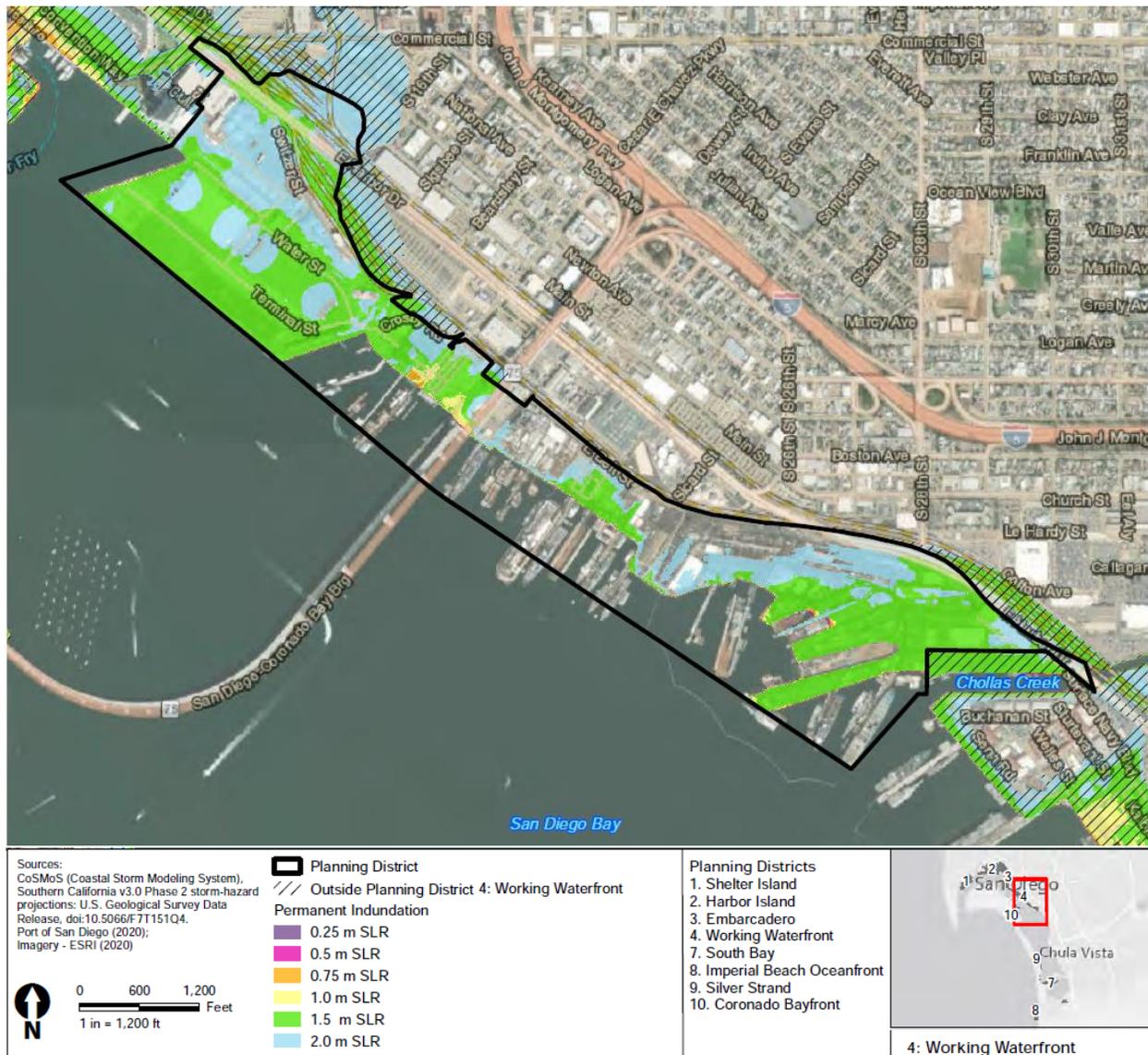


Figure 4.13-5. Permanent Inundation Under Sea Level Rise for South Bay (PD7)

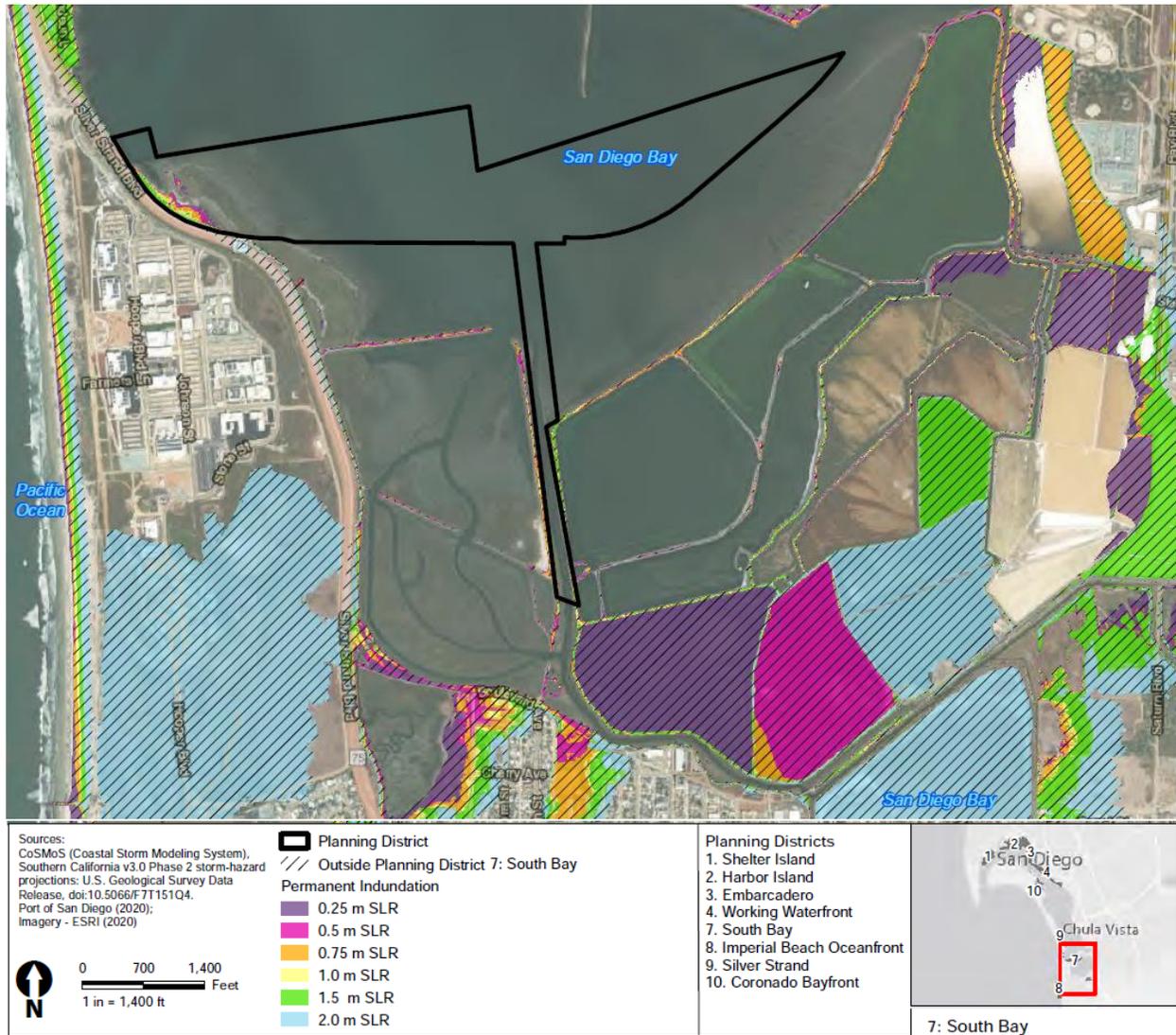


Figure 4.13-6. Permanent Inundation Under Sea Level Rise for Imperial Beach Oceanfront (PD8)

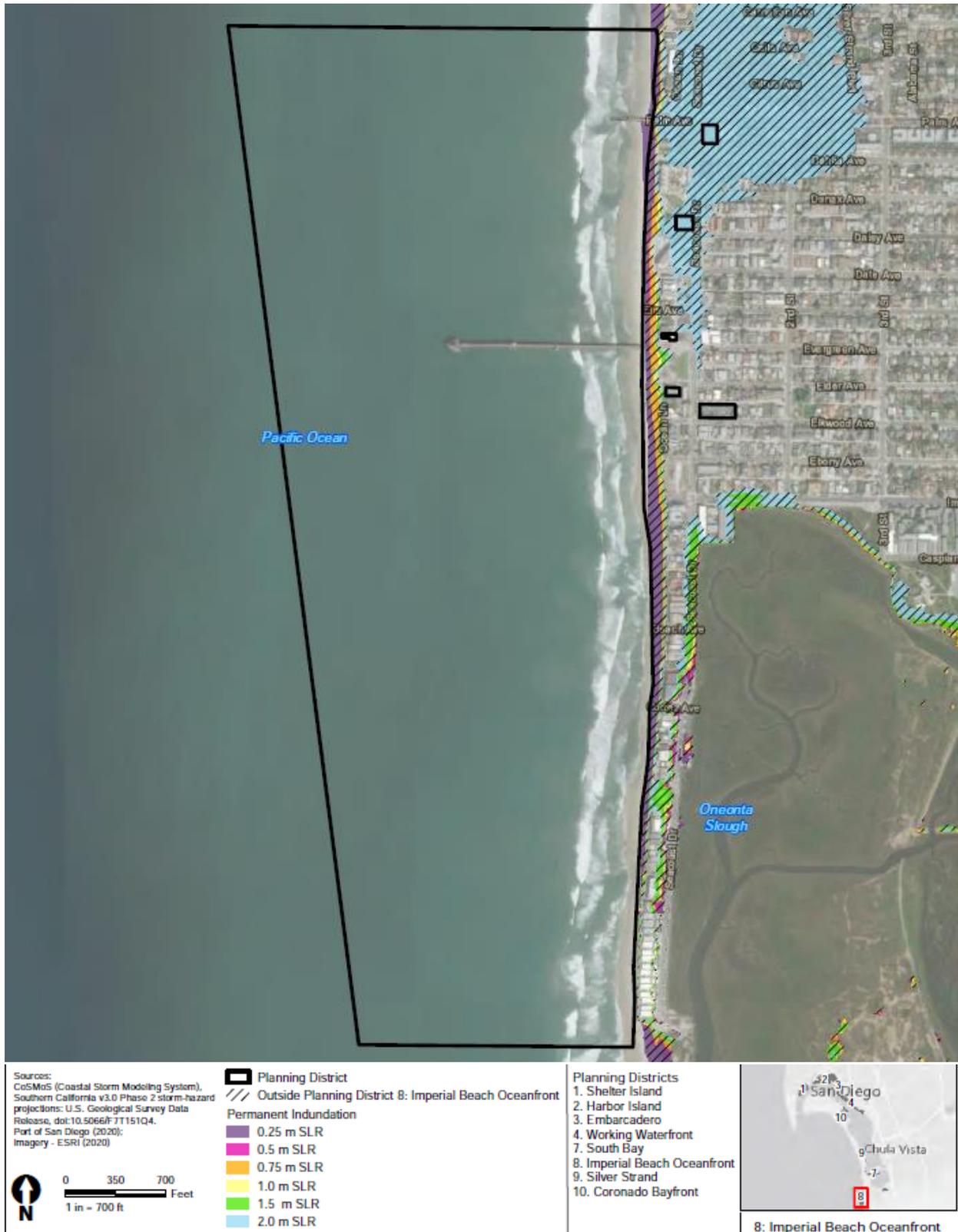


Figure 4.13-7. Permanent Inundation Under Sea Level Rise for Silver Strand (PD9)



Figure 4.13-8. Permanent Inundation Under Sea Level Rise for Coronado Bayfront (PD10)



Table 4.13-4. Acreage Potentially Exposed to Sea Level Rise Scenarios During a 100-Year Storm

Water and Land Use Designation	Sea Level Rise Scenarios (meters)								Net Change	Not Exposed
	Existing Exposure	0.25 ¹	0.5 ²	0.75 ³	1.0 ⁴	1.5 ⁴	2.0 ⁴	Total Exposed		
Water Use Designations										
Anchorage	152.7	0.0	0.0	0.0	0.0	0.0	0.0	152.8	0.1	0.0
Commercial Fishing Berthing	29.5	0.1	0.1	0.1	0.1	0.0	0.0	29.8	0.3	0.0
Conservation/Intertidal	1,543.7	9.8	2.3	1.6	1.2	5.0	5.2	1568.8	25.1	1.2
Industrial and Deep Water Berthing	295.4	0.2	0.2	0.1	0.1	0.0	0.0	296.0	0.6	0.0
Marine Services Berthing	15.1	0.1	0.1	0.1	0.1	0.1	0.0	15.5	0.4	0.0
Navigation Corridor	375.9	0.4	0.5	0.4	0.2	0.0	0.0	377.3	1.4	0.0
Open Bay/Water	744.7	1.5	1.2	1.2	0.8	1.6	1.3	752.3	7.6	0.2
Recreational Berthing	384.1	1.2	1.0	0.9	0.7	0.9	0.9	389.7	5.6	0.5
Sportfishing Berthing	10.9	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.2	0.0
Land Use Designation										
Commercial Fishing	1.9	0.1	1.4	2.2	1.2	0.4	0.0	7.2	5.3	0.0
Commercial Recreation	16.4	9.2	20.3	55.5	43.6	97.2	116.3	358.5	342.1	109.6
Conservation Open Space	13.2	3.9	4.6	4.0	2.2	9.5	12.4	49.8	36.6	18.4
Institutional/Roadway	1.5	0.7	0.5	1.0	1.6	0.7	0.2	6.2	4.7	0.9
Marine Sales and Services	0.2	0.9	0.9	1.7	3.0	1.7	0.3	8.7	8.5	0.0
Marine Terminal	3.5	0.3	0.3	19.3	63.1	78.2	37.4	202.1	198.6	31.5
Maritime Services and Industrial	6.8	0.4	2.1	30.3	43.7	87.9	85.3	256.5	249.7	79.3
Recreation Open Space	25.2	8.0	12.2	49.0	66.9	110.2	77.2	348.8	323.6	69.0
Sportfishing	0.0	0.0	0.0	2.3	1.3	0.9	0.0	4.5	4.5	0.0
Visitor-Serving Marine Terminal	12.1	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	0.0

¹ Correlates to the 2030 5% probability scenario.

² Correlates to the 2050 5% probability scenario.

³ Correlates to the 2100 RCP 8.5 50% probability scenario.

⁴ Shown for informational purposes only.

Figure 4.13-9: Temporary Flooding and Inundation Under Sea Level Rise with 100-Year Storm for Shelter Island (PD1)

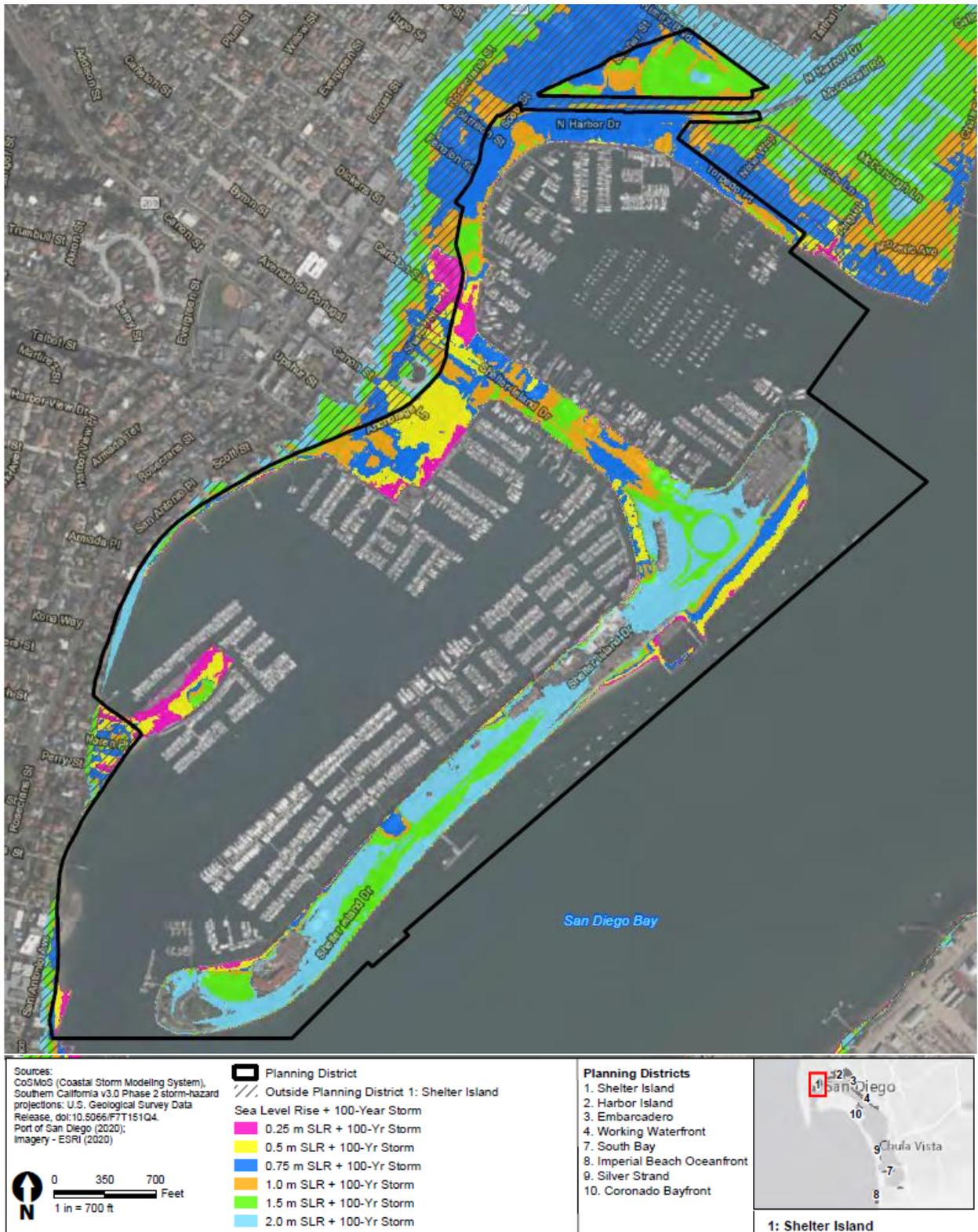


Figure 4.13-10: Temporary Flooding Inundation Under Sea Level Rise with 100-Year Storm for Harbor Island (PD2)

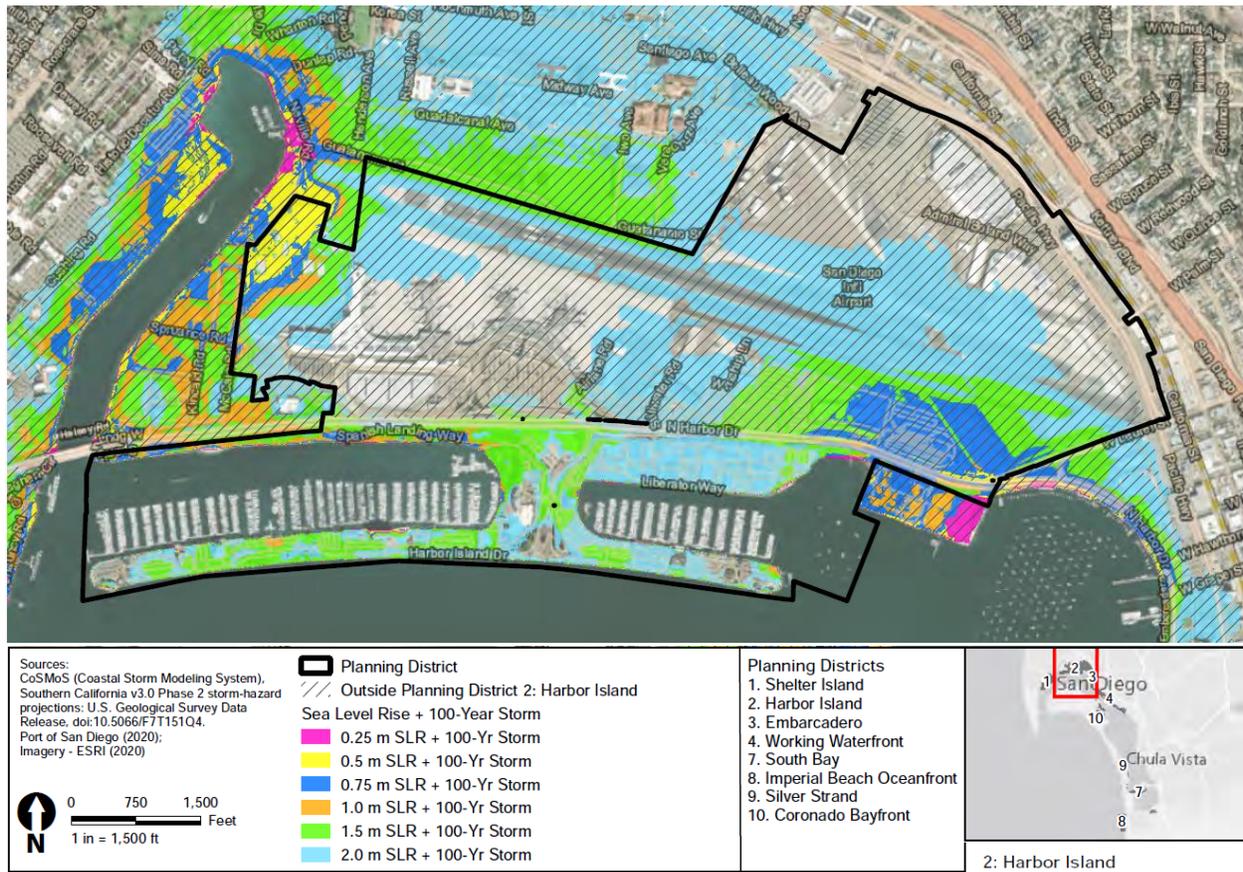


Figure 4.13-11: Temporary Flooding and Inundation Under Sea Level Rise with 100-Year Storm for Embarcadero (PD3)

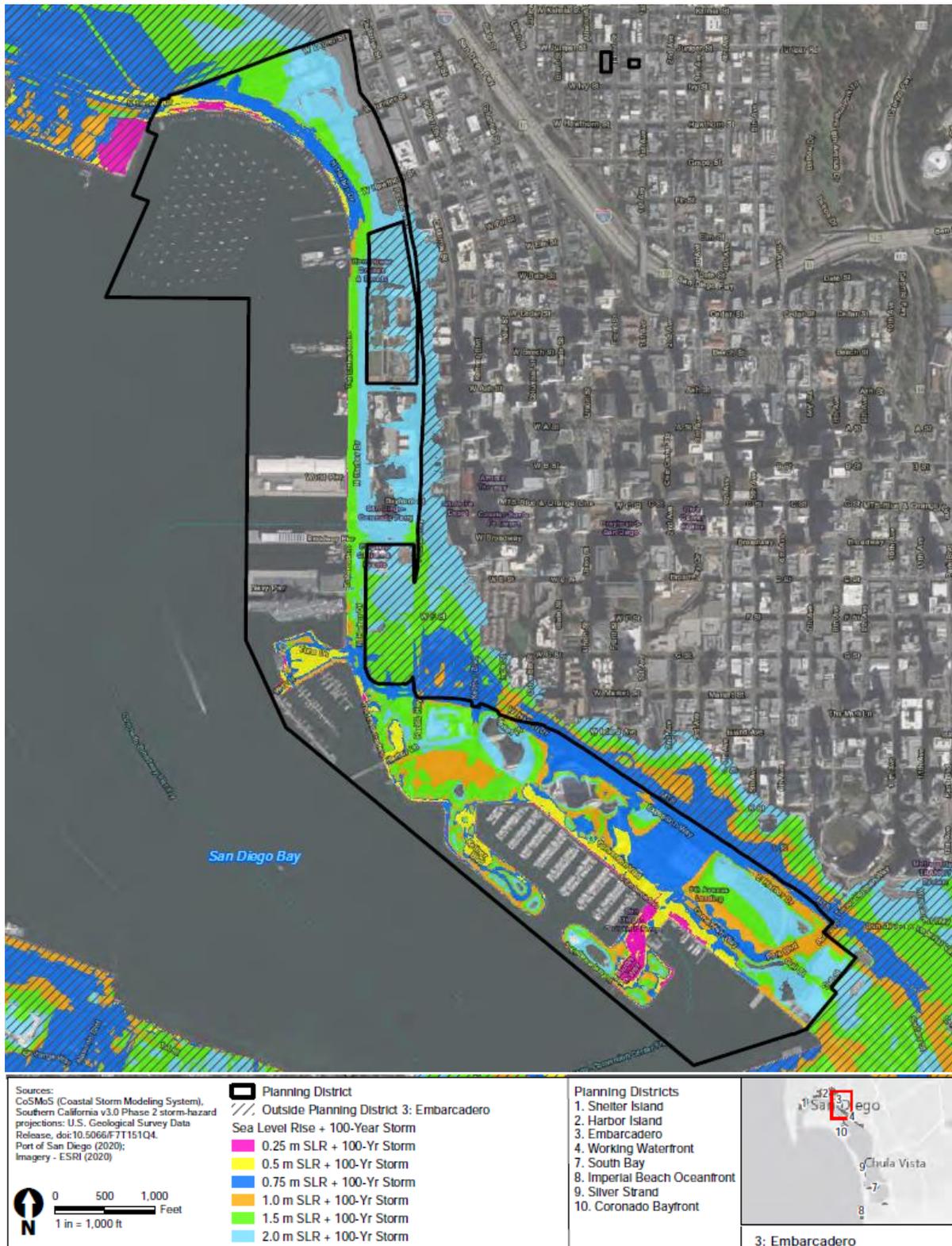


Figure 4.13-12: Temporary Flooding and Inundation Under Sea Level Rise with 100-Year Storm for Working Waterfront (PD4)

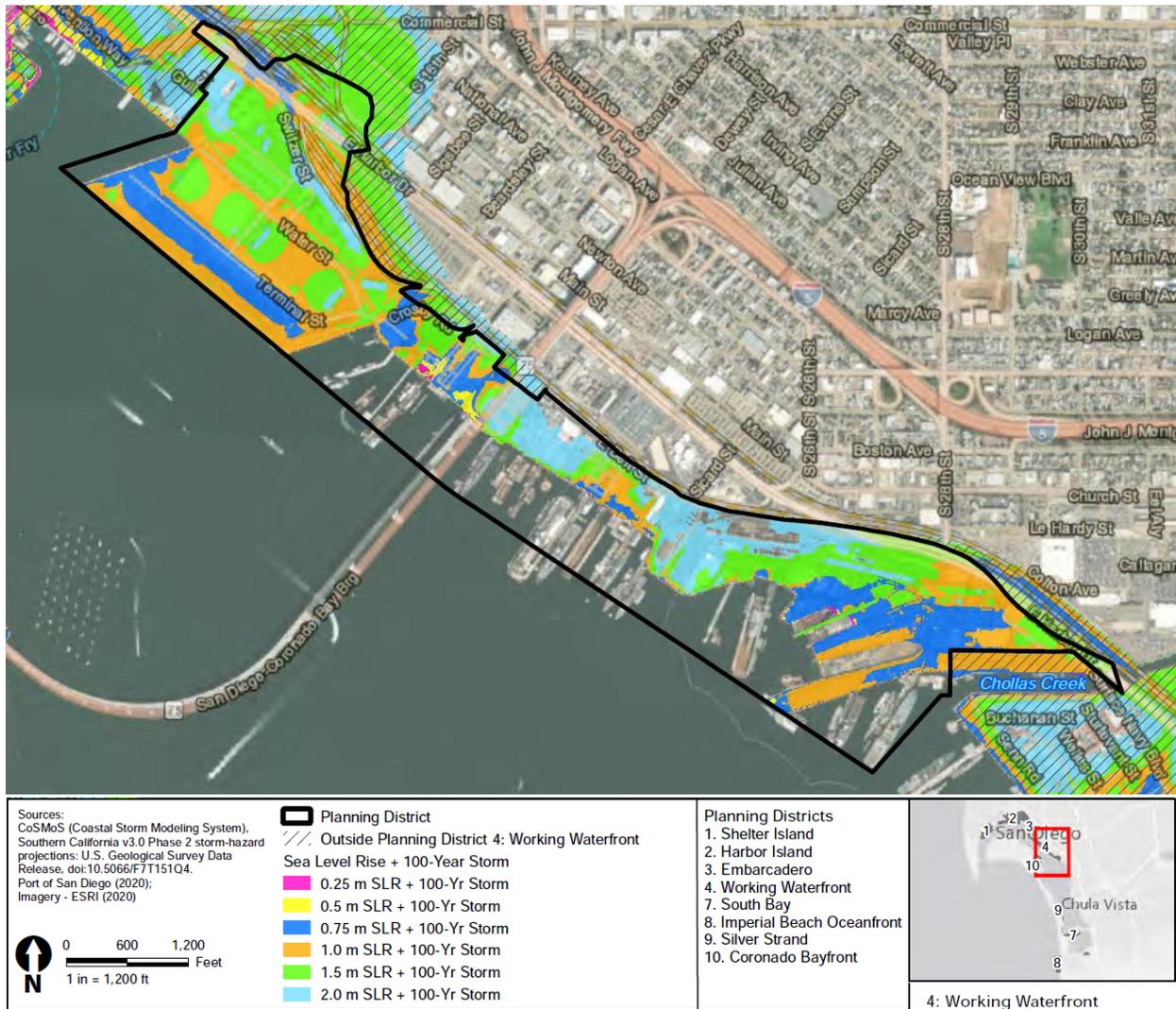


Figure 4.13-13: Temporary Flooding and Inundation Under Sea Level Rise with 100-Year Storm for South Bay (PD7)

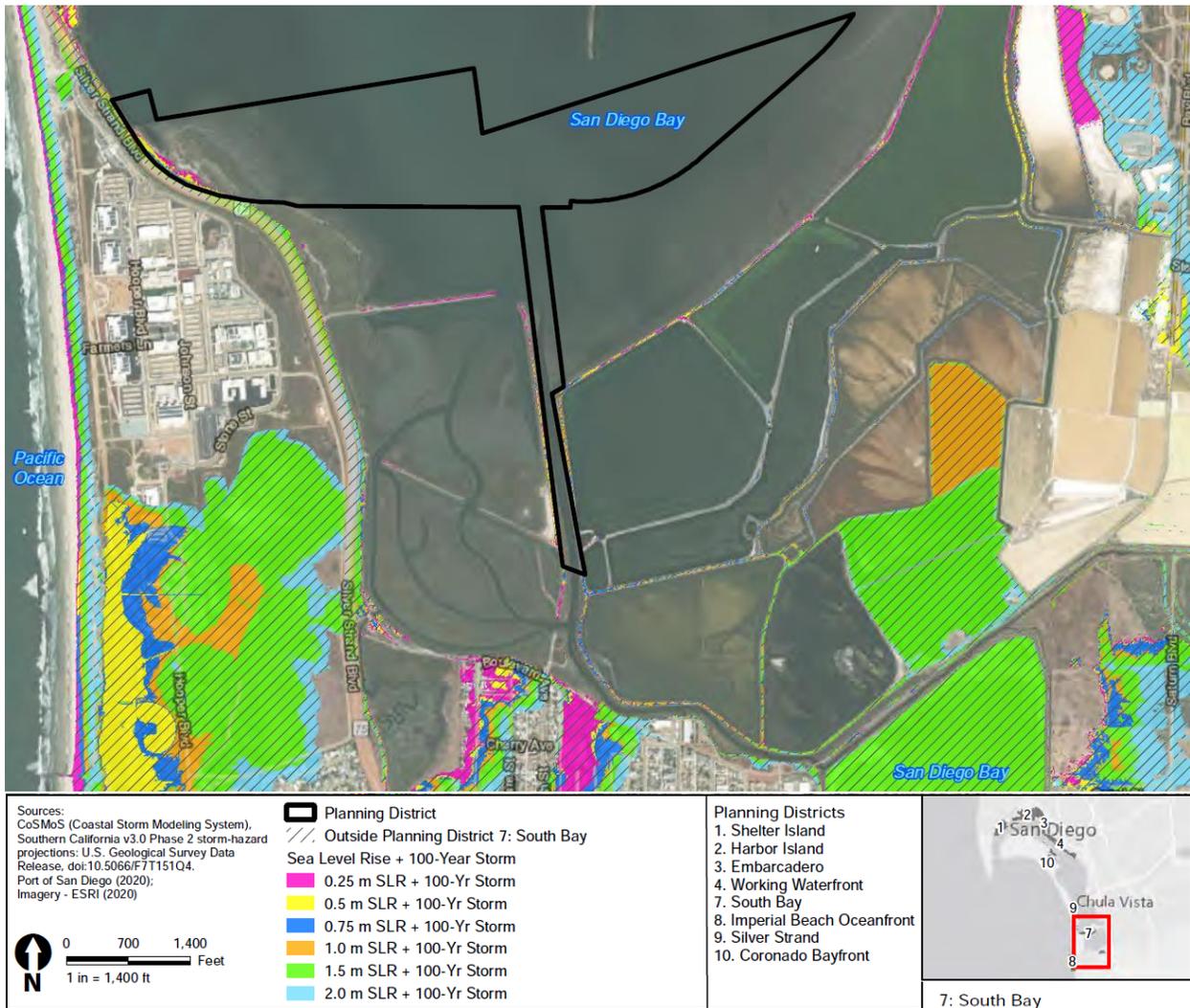


Figure 4.13-14: Temporary Flooding and Inundation Under Sea Level Rise with 100-Year Storm for Imperial Beach Oceanfront (PD8)

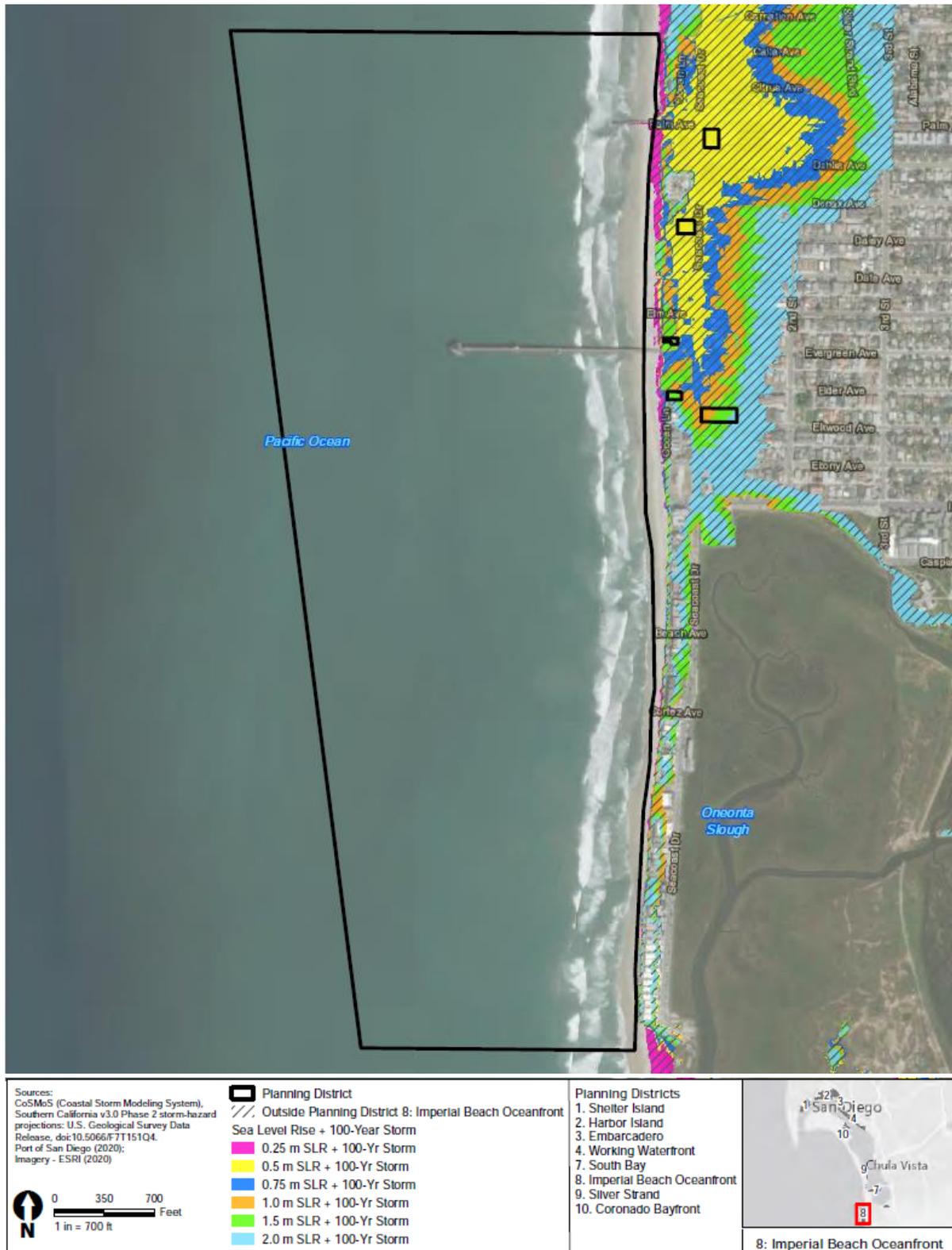


Figure 4.13-15: Temporary Flooding and Inundation Under Sea Level Rise with 100-Year Storm for Silver Strand (PD9)

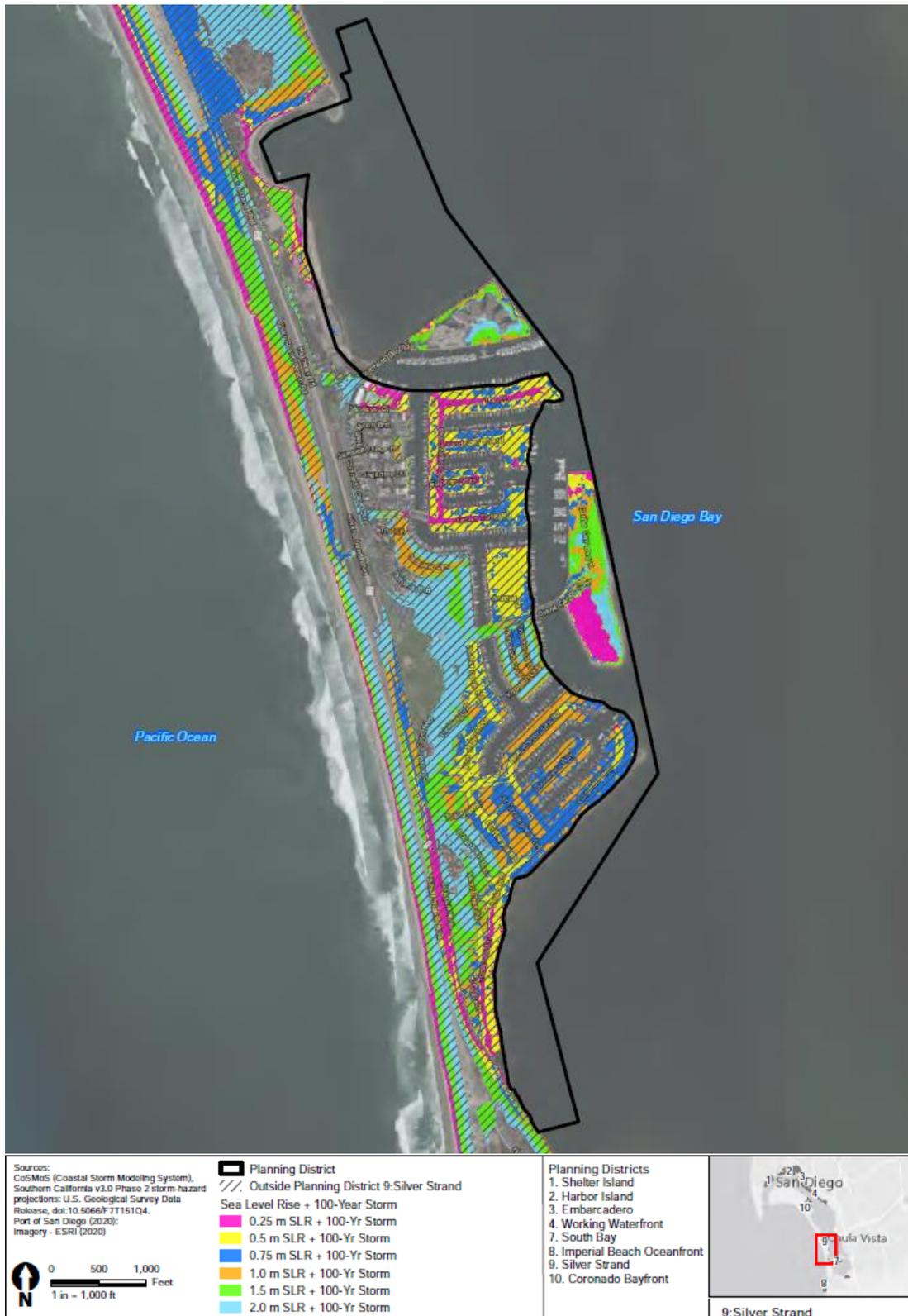
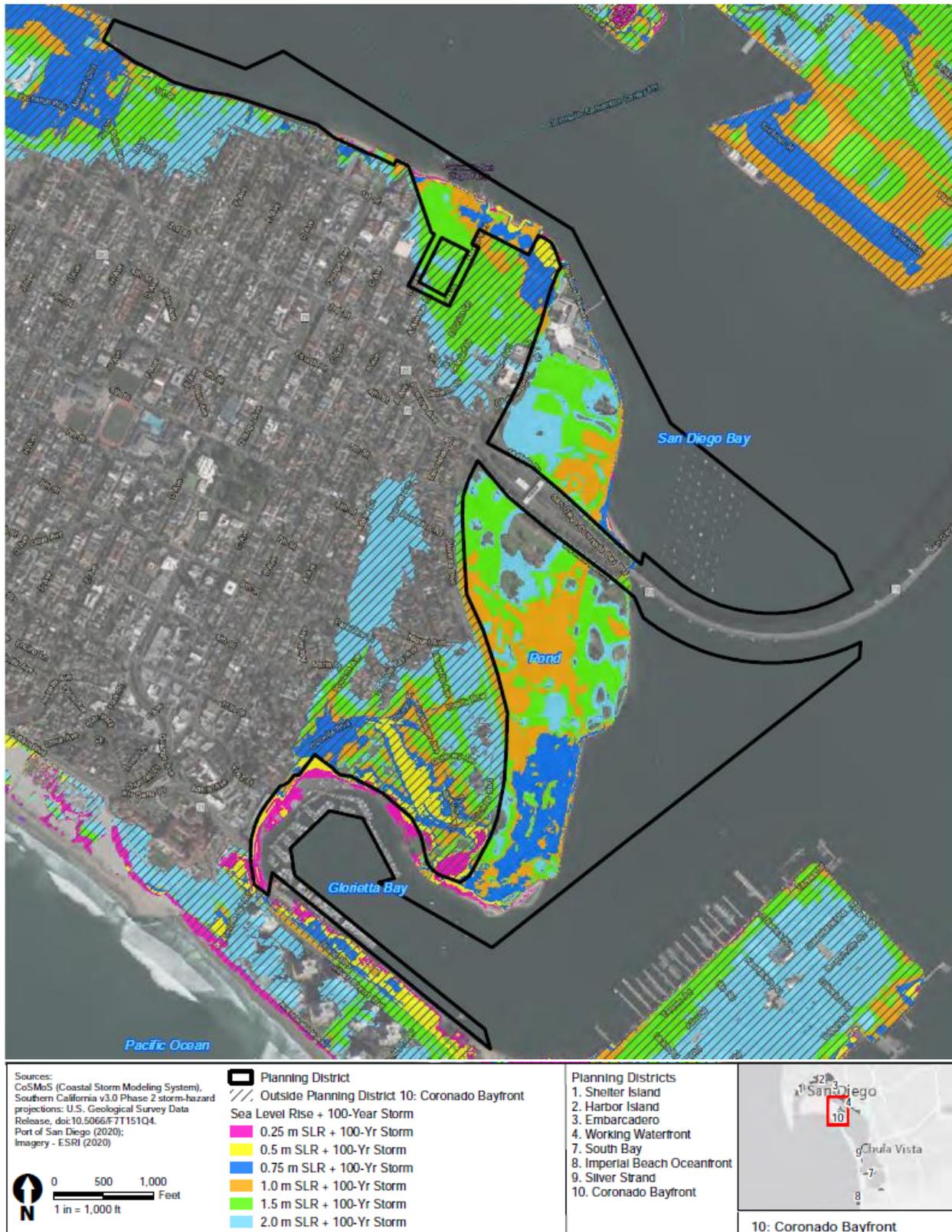


Figure 4.13-16: Temporary Flooding and Inundation Under Sea Level Rise with 100-Year Storm for Coronado Bayfront (PD10)



Natural Habitat

Natural habitat includes conservation open space and land reserved for wildlife management and environmental protection.

Sensitivity

Natural habitats face high sensitivity to sea level rise. Inundation and coastal erosion could damage vegetation and the land that supports habitats. Sea water could intrude into freshwater sources, contaminating them. The District's AB 691 Report found that terrestrial habitats, such as salt marsh, beach/dune, and upland habitats, are projected to decline as sea levels rise.

Natural habitats face low sensitivity to temporary inundation from storm surge. Increased flooding could damage habitats; however, coastal habitats are already accustomed to a degree of regular temporary flooding.

Adaptive Capacity

Natural habitats have high adaptive capacity to sea level rise if they are able to keep pace with rising sea levels through natural accretion or by migrating to suitable higher elevations. Accretion is the process of gradual accumulation of additional layers of matter (this capability varies by species and sea level rise scenario). However, urban land uses adjacent to these habitats may hinder how far they can migrate.

Natural habitats have high adaptive capacity to temporary inundation from storm surge. Depending on the type of natural habitat, some areas may be able to absorb water from temporary flooding.

Consequences

Consequences from sea level rise to natural habitats are high. Damage from sea level rise could result in habitat loss, which may be especially significant if it affects endangered species. Intruding saltwater could also affect freshwater sources and push both aquatic and terrestrial habitats farther inland. Sea level rise and erosion may also result in other effects on natural habitats, such as changes in sediment and nutrient availability that further affect the distribution of species. Sea level rise may also result in a loss of public access and recreational opportunities on beaches; as beaches cannot migrate inland easily, they may become narrower or disappear.

Consequences from temporary inundation due to storm surge for natural habitats are low. Temporary flooding could result in periodic loss of access to coastal habitats and public beaches. However, normal operations may resume at recreational beach areas once waters recede.

Park Space

Park space includes Recreation Open Space such as community parks and gardens.

Sensitivity

Park space has high sensitivity to sea level rise. If improperly designed, permanent inundation and coastal erosion would limit access to parks and damage structures and vegetation.

Park space has low sensitivity to temporary inundation from storm surge. If the design does not account for it, periodic flooding may temporarily limit access to a park, but parks can generally reopen relatively easily once floodwaters recede.

Adaptive Capacity

Traditional park space has low adaptive capacity to sea level rise. Parks are not easily movable if permanent inundation occurs. However, more and more parks are being designed to accommodate sea level rise over time with terraced steps down to the waterfront that can gradually flood and landscape features that help prevent storm surge flooding from reaching inland areas.

Park space has high adaptive capacity to temporary inundation from storm surge. Implementation of porous ground materials and high use of natural infrastructure can help mitigate temporary flooding in parks.

Consequences

Consequences of sea level rise effects on park space are high. If improperly designed, inundation and coastal erosion could alter habitat types in parks and result in permanent loss of public access.

Consequences of temporary inundation from storm surge to park spaces are low. If improperly designed, flooding can potentially pose a threat to public safety; however, with proper closures, the public can be directed to other parks that have not been affected during temporary flooding events.

Structures

Structures include buildings for commercial and recreation purposes, such as marine and fishing facilities, visitor centers, hotels, retail, and restaurants.

Sensitivity

Future structures would be highly sensitive to sea level rise. If improperly designed, permanent inundation could result, rendering the structure unusable, and any services provided would potentially be halted.

Future structures would have high sensitivity to temporary flooding from storm surge. If improperly designed, storm-induced flooding could damage structures (e.g., drywall, flooring, electrical outlets), flood their contents, and temporarily limit access to and use of the facility. Parking areas that support structures are not sensitive to temporary flooding as they can return to service after being cleared of debris.

Adaptive Capacity

Future structures have low adaptive capacity to sea level rise. Individual future, new structures can be designed to be elevated during initial construction to avoid flooding due to sea level rise or can be designed to abandon the first floor when it becomes necessary. However, the infrastructure they rely on (e.g., access roads, utilities) may not be as resilient, which would essentially render the structure unusable.

Future structures have high adaptive capacity to temporary inundation from storm surge. Short-term solutions, such as temporary flood barriers and sandbags, can help prevent sea level rise

effects due to flooding. In addition, they can be designed to be elevated above the future floodplain or use wet or dry floodproofing methods.

Consequences

Consequences to structures from sea level rise are high. If improperly designed, loss of structures due to permanent inundation could result in costly replacements if no adaptation takes place. Furthermore, the loss of operations or services housed in a structure inundated by sea level rise may affect District or tenant operations.

The consequences of temporary flooding of structures are dependent on the level of flooding and resulting amount of damage to the structure. In general, short-term inaccessibility may occur but is unlikely to severely impact coastal dependent uses. If not properly addressed after a flood, mold can grow in the damaged structure, which can impact human health.

Infrastructure

Infrastructure includes roadways and land areas designated for critical functions, such as utility infrastructure.

Sensitivity

Infrastructure has a high sensitivity to both sea level rise and temporary inundation from storm surge. If improperly designed, regular or permanent inundation, flooding, and coastal erosion can cause structural damage to roadways. Electrical equipment that is part of utility infrastructure is also highly sensitive if designed without accounting for sea level rise, and even temporary flooding can result in costly damage. Sea level rise can also affect stormwater infrastructure. If improperly designed, inundation can cause drain pumps to continuously run, resulting in potential pump burnout and failure, and cause backup of water in outfalls, resulting in inland flooding at storm drains.

Adaptive Capacity

Adaptive capacity of infrastructure to sea level rise depends on the asset type. Some assets, such as water and wastewater infrastructure, work within a networked system and thus have redundancy if some infrastructure becomes permanently inundated. However, inundation that occurs at an electrical substation could affect many customers that rely on that asset for electricity, and costly adaptation may be required. Likewise, elevating or moving roads to address sea level rise is very costly and requires extensive planning.

Adaptive capacity of infrastructure to temporary inundation from storm surge is similar as it depends on asset type. For example, roadways may have high adaptive capacity to temporary inundation as drivers can take alternative routes for the time being. Likewise, vaults for underground utilities can usually be waterproofed or use submersible equipment. Aboveground utility infrastructure can install floodwalls and pumps to prevent damages during temporary flood events.

Consequences

Consequences of impacts from sea level rise and temporary inundation to infrastructure are high; even temporary flooding could render roadways inaccessible. If major roadways are permanently

inundated or eroded, new routes may need to be created. Infrastructure that serves critical functions may also require protection to avoid significant consequences, such as service outages or safety threats. However, stormwater infrastructure may be more difficult to adapt to sea level rise and may thus require more costly fixes or replacements.

Open Water

Open water includes the open bay and water areas used as navigation corridors. These water use types are not sensitive to sea level rise, so there are no expected consequences.

Floating Structures

Floating structures include marinas and water use types related to anchoring and berthing. These water use types are not sensitive to sea level rise, so there are no expected consequences.

Underwater Structures

Underwater structures include aquaculture, boat launches, and other underwater functions. These water use types are not sensitive to sea level rise, so there are no expected consequences.

Fixed Structures

Fixed structures include small piers and other structures in water that are affixed to land.

Sensitivity

Fixed structures have high sensitivity to sea level rise. If they are not designed to account for sea level rise, they may be subject to damage from erosion and permanent inundation over time. If this occurs, they may need to be raised or removed and replaced to resume full functionality. Even before the structures are overtopped with water, flooding of the bottom of the deck can increase deterioration and interfere with maintenance.

Fixed structures also have high sensitivity to temporary inundation from storm surge if they are not designed for it. They may be overtopped during storms, temporarily eliminating access and use.

Adaptive Capacity

Fixed structures have low adaptive capacity to sea level rise. They may not be easily removed and may have to be rebuilt or elevated to avoid permanent inundation.

Fixed structures have high adaptive capacity to temporary inundation from storm surge. Short-term solutions such as sandbags and temporary flood barriers can be used to protect structures and assets on the fixed structures. In addition, flood walls along the perimeter of the structure with removable barriers at access points can prevent flooding of the structures, though they may still be overtopped and need to be designed to not interfere with routine operations.

Consequences

Sea level rise and temporary flooding impacts on fixed structures are high. These structures may become inaccessible if inundation occurs and may affect coastal dependent uses. Higher water levels may also result in higher vessel positions, potentially increasing difficulty for cargo handling facilities.

Impact Analysis Conclusions

As identified in Section 4.13.4.3 above, the proposed PMPU includes several policies to reduce or avoid risks posed by sea level rise and storm surge, including existing structures, human health, and sensitive resources. These policies require, among other things, permittees to submit site-specific hazards reports to the District that address anticipated coastal hazards over the anticipated life of the development (SR Policy 3.3.1). Other proposed PMPU policies require permittees to site and design development to avoid effects from projected sea level rise considering the anticipated life of the development and, if coastal hazards cannot be completely avoided, to plan, design, and implement adaptation strategies (see SR Policy 3.3.2). Additionally, to reduce the risks posed to neighboring properties and the natural environment from coastal protection devices, the proposed PMPU requires the prioritization of nature-based adaptation strategies, where feasible (SR Policy 3.3.4). If coastal protection devices are used, they must be designed to minimize adverse effects on local sand supply, recreation, habitat, scenic views, beach width, coastal fill, and effects on coastal access and other Public Trust uses (SR Policy 3.3.10). Sea level rise and increased “storminess” due to climate change may increase wave uprush, which would be analyzed on an individual development basis, as required in SR Policy 3.3.1. Specific design approaches would be reviewed by the District as specific development proposals are submitted for development review.

All future development allowed under the proposed PMPU would be required to demonstrate consistency with the proposed PMPU policies related to sea level rise. Thus, the policies associated with the proposed PMPU would ensure that new development of water and land uses would not exacerbate any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, in association with sea level rise and storm surge. Moreover, any flooding would occur irrespective of any future PMPU-related development. As such, the proposed PMPU would not exacerbate the potential for inundation due to projected sea level rise or storm surge, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, *Project Description*, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to exacerbating any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, in association with sea level rise and storm surge.

Based on available sea level rise modeling, the closed portions of North Harbor Drive and the Waterfront Destination Park are not projected to be exposed to permanent inundation under the three analysis thresholds (i.e., 0.25 meter sea level rise by 2030, 0.5 meter sea level rise by 2050, 0.75 meter sea level rise by 2100). For the purposes of disclosure, if not designed to account for sea level rise, the southern portions of this area (e.g., West G Street and adjacent

areas) would be inundated if sea levels rose by 1.5 meters, and the entire closed portions of North Harbor Drive and the Waterfront Destination Park would be permanently inundated with 2.0 meters of sea level rise. Permanent inundation would limit access to the park and damage structures and vegetation.

Through 2050 (i.e., 0.5 meter of sea level rise), no temporary inundation of the closed portions of North Harbor Drive and the Waterfront Destination Park is projected under a 100-year storm scenario. By 2100, under a 0.75 meter sea level rise scenario, temporary inundation could affect the southern portions of this area (e.g., West G Street and adjacent areas). For the purposes of disclosure, the entire closed portions of North Harbor Drive and the Waterfront Destination Park would experience flooding during a 100-year storm with 1.5 or more meters of sea level rise. If the design does not account for it, periodic flooding may temporarily limit access to a park, but parks can generally reopen relatively easily once floodwaters recede.

Per the proposed PMPU SR Policy 3.3.2, “the District shall require permittees to site and design development to avoid impacts from coastal hazards from projected sea level rise considering the anticipated life of the development, where feasible.” This requirement would ensure that the development of the future Waterfront Destination Park accounts for these sea level rise impacts in its design.

Implementation of Option 1 would not result any additional or more severe impacts related to exacerbating any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, in association with sea level rise and storm surge, than buildout of the proposed PMPU without Option 1. Impacts would be less than significant.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to exacerbating any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, in association with sea level rise and storm surge.

The continuous park under Option 2 is not projected to be exposed to sea level rise under the analysis thresholds (i.e., 0.25 meter sea level rise by 2030, 0.5 meter sea level rise by 2050, 0.75 meter sea level rise by 2100). If the park is not designed to account for sea level rise, temporary flooding due to a 100-year storm under the 0.75 meter of sea level rise scenario would impact a small piece the northern portion of the park between Hawthorne Street and Grape Street. For the purposes of disclosure, this same portion of the park may experience permanent inundation with 1.5 meters of sea level rise. With 2 meters of sea level rise and a 100-year storm, large sections of the park area would experience temporary flooding. If the design does not account for it, periodic flooding may temporarily limit access to a park, but parks can generally reopen relatively easily once floodwaters recede.

Per the proposed PMPU SR Policy 3.3.2, “the District shall require permittees to site and design development to avoid impacts from coastal hazards from projected sea level rise considering the anticipated life of the development, where feasible.” This requirement would ensure that the development of the future continuous park accounts for these sea level rise impacts in its design.

Implementation of Option 2 would not result any additional or more severe impacts related to exacerbating any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, in association with sea level rise and storm surge, than buildout of the proposed PMPU without Option 2. Impacts would be less than significant.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to exacerbating any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, in association with sea level rise and storm surge.

The realignment of North Harbor Drive and the 250-foot setback under Option 3 is not projected to be exposed to sea level rise under the analysis thresholds (i.e., 0.25 meter sea level rise by 2030, 0.5 meter sea level rise by 2050, 0.75 meter sea level rise by 2100). If the setback is not designed to account for sea level rise, temporary flooding due to a 100-year storm under the 0.75 meter of sea level rise scenario would affect a small piece the northern portion of the setback between Hawthorne Street and Grape Street. For the purposes of disclosure, this same portion of the setback may experience permanent inundation with 1.5 meters of sea level rise. With 2 meters of sea level rise and a 100-year storm, large sections of the setback area would experience temporary flooding. If the design does not account for it, periodic flooding may temporarily limit access to a park, but parks can generally reopen relatively easily once floodwaters recede.

Per the proposed PMPU SR Policy 3.3.2, “the District shall require permittees to site and design development to avoid impacts from coastal hazards from projected sea level rise considering the anticipated life of the development, where feasible.” This requirement will ensure that the realignment of North Harbor Drive and the setback accounts for these sea level rise impacts in its design.

Implementation of Option 3 would not result any additional or more severe impacts related to exacerbating any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, in association with sea level rise and storm surge, than buildout of the proposed PMPU without Option 3. Impacts would be less than significant.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to the potential exacerbation of existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, in association sea level rise and storm surge. Rather, the proposed PMPU policies listed in Section 4.13.4.3 would reduce potential impacts from sea level rise by requiring both the District and future permittees (i.e., project proponents) to address sea level rise using adaptation strategies. For example, SR Policy 3.2.3 requires the District to prepare, and periodically update, a sea level rise adaptation plan that would include several components, including but not limited to, providing recommendations for adapting structures and facilities, coastal access, etc., and exploring the potential for nature-based sea level rise adaptation strategies. Other proposed PMPU policies require future permittees to complete site-specific coastal hazards analyses and identify adaptation strategies needed to address these hazards.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not exacerbate any existing and/or projected damage to the environment, including existing structures, human health, and sensitive resources, in association with sea level rise and storm surge. Impacts would be less than significant.

Threshold 2: Result in an inconsistency with the applicable sea level rise policies of the CCC 2018 Sea Level Rise Policy Guidance adopted for the purpose of avoiding or mitigating an environmental effect from sea level rise?

Impact Analysis

The CCC Sea Level Rise Policy Guidance helps planners address sea level rise risks for their projects. It describes consequences from sea level rise and offers step-by-step guidance on addressing risks for local coastal programs and coastal development permits. The guidance also lists potential adaptation strategies to address sea level rise risks. The guidance is advisory and not a regulatory document or legal standard of review for the actions that the Commission or local jurisdictions may take under the Coastal Act.

The CCC guidance does not directly address port master plans; however, port master plans are similar to Local Coastal Plans (LCPs) since they govern land use and development in the coastal zone. Therefore, the analysis reviews the proposed PMPU's consistency with the CCC's sea level rise guidance for LCPs in Table 4.13-5, as well as the proposed PMPU's consistency with the goals for adaptation strategies in Table 4.13-6.

Table 4.13-5. PMPU Consistency with California Coastal Commission 2018 Sea Level Rise LCP Guidance

Guidance	PMPU Consistency
Determine range of sea level rise projections relevant to LCP planning	Consistent. As described in Section 4.13.4.1, <i>Methodology</i> , the District has drawn from the 2018 Ocean Protection Council's guidance, the CCC's Sea Level Rise Policy Guidance (i.e., the medium-risk aversion scenario), Making California's Coast Resilient to Sea Level Rise: Principles for Aligned State Action (i.e., 3.5 feet of sea level rise by 2050), and input from a technical stakeholder group to develop a range of sea level rise projections for use in planning (see Table 4.13-3). These projections consider multiple time horizons and climate scenarios, including 2030, 2050, and multiple scenarios for 2100, and the results from modeling these projections were used to inform the sea level rise portions of the proposed PMPU.
Identify potential sea level rise impacts in LCP planning	Consistent. As part of the AB 691 Report (Appendix I), the District reviewed the historical rates of sea level rise in the region and developed sea level rise and storm surge inundation maps for each planning district under the various sea level rise scenarios to understand the physical impacts of future sea level rise. This report served as a planning input for the proposed PMPU to identify the potential effects on existing and future uses on District Tidelands from sea level rise (see Section 3.4.2(C)-II-Adapting to Sea Level Rise in the proposed PMPU).

Guidance	PMPU Consistency
Assess potential risks from sea level rise to coastal resources and development in LCP planning area	Consistent. The AB 691 Report included an analysis of the exposure, sensitivity, and adaptive capacity of transportation assets, infrastructure, and natural resources to the various sea level rise and storm surge scenarios. The AB 691 Report also analyzed the financial consequences of sea level rise and potential changes in habitat distribution. This report served as a planning input for the proposed PMPU to identify the potential risks to existing and future coastal dependent uses on District Tidelands from sea level rise (see section 3.4.2(C)-II-Adapting to Sea Level Rise in the proposed PMPU).
Identify LCP adaptation strategies to minimize risks	Consistent. Building on the AB 691 Report, the proposed PMPU contains sea level rise policies meant to reduce the anticipated risks of sea level rise impacts (see Section 4.13.4.3 for a complete list).
Draft updated or new LCP for certification with the CCC	Consistent. The proposed PMPU is the update to the current PMP. It will be presented to the CCC for certification after Board consideration.
Implement LCP and monitor and revise as needed	Consistent. The proposed PMPU would be implemented after its certification by the CCC. SR Policy 3.2.3 of the proposed PMPU requires the District to prepare, and periodically update, a sea level rise adaptation plan that would involve several components, including but not limited to, considering the best available science and applicable regional, State, and Federal adaptation planning guidance; providing recommendations for adapting structures and facilities, coastal access, etc.; exploring the potential for nature-based sea level rise adaptation strategies; and establishing a monitoring protocol and requirements for evaluating sea level rise impacts on Tidelands uses over time.

Chapter 7 of the CCC guidance describes specific adaptation strategies that planners can consider integrating in their planning and development review processes. The CCC is clear that this chapter should not be considered a checklist from which all adaptation strategies need to be used, nor an exhaustive list of all possible adaptation strategies, and that strategies should be selected based on specific vulnerabilities to the project site. Table 4.13-6 shows the proposed PMPU's consistency with adaptation strategy goals listed in the CCC guidance.

Table 4.13-6. PMPU Consistency with California Coastal Commission Sea Level Rise Adaptation Strategy Goals

Goal	PMPU Consistency
Coastal Development and Hazards	
Update land use designations, zoning maps, and ordinances to account for changing hazard zones	The AB 691 Report included an analysis of the exposure, sensitivity, and adaptive capacity of transportation assets, infrastructure, and natural resources to the various sea level rise and storm surge scenarios. The AB 691 Report also analyzed the financial consequences of sea level rise and potential changes in habitat distribution. This report served as a planning input for the proposed PMPU to identify the potential risks to existing and future coastal dependent uses on District Tidelands from sea level rise (see Section 3.4.2(C)-II-Adapting to Sea Level Rise in the proposed PMPU).
Include sea level rise in hazard analyses and policies	This goal is addressed through:

Goal	PMPU Consistency
	<p>SR Policy 3.3.2: The District shall require permittees to site and design development to avoid impacts from coastal hazards from projected SLR considering the anticipated life of the development, where feasible.</p> <p>a. If coastal hazards cannot be completely avoided, the District shall require planning, designing, and implementation of adaptation strategies, that:</p> <ol style="list-style-type: none"> 1. Address the hazards over the anticipated life of the development; 2. Protect coastal resources, public access, and recreational facilities, and 3. Minimize risks to life and property to the maximum extent feasible.
<p>Plan and locate new development to be safe from hazards, not require protection over its entire lifespan, and be protective of coastal resources</p>	<p>This goal is addressed through:</p> <p>SR Policy 3.3.1: Permittees shall submit a site-specific hazard report to the District using best available science and considers best practices as provided by Federal, State, or regional guidance on coastal resiliency. At a minimum, the site-specific hazard report shall address anticipated coastal hazards over the anticipated life of the development, including, but not limited to inundation; flooding associated with storms of various return periods, including a 100-year storm; wave runup and overtopping; historic and projected future shoreline erosion; groundwater rise; saltwater intrusion; tsunamis; and changes to these hazards over time due to projected SLR at the site. The following requirements apply to the site-specific hazard analysis for the report:</p> <ol style="list-style-type: none"> a. The analysis shall be conducted by a licensed engineer with experience in coastal processes and shall be submitted to the District for its review and approval. b. Using best available science and applicable regional, State, or Federal adaptation planning guidance documents, the analysis shall consider multiple SLR scenarios and projections associated with the anticipated life of the development and, when applicable, identify potential future impacts on on-site natural resources. c. The analysis shall identify threshold SLR amounts that could lead to impacts (e.g., the amount of SLR that could lead to overtopping of the proposed development). d. For development that does not meet the requirements that allow shoreline protective devices subject to SR Policy 3.3.3, SR Policy 3.3.6, or SR Policy 3.3.9, the hazard analysis shall be performed assuming no reliance upon future shoreline protective devices. e. If applicable, the report shall identify the coastal hazards that could trigger implementation of SLR adaptation strategies. If the development cannot fully minimize or avoid the impacts of coastal hazards for the anticipated life of the development, the report shall discuss possible adaptation responses to the hazards to reduce risk as feasible and mitigate impacts on coastal resources. f. As part of Coastal Act approval, the District shall review the report and require the development to implement the recommendations in the report and/or any other siting and design adaptation measures that the District determines are necessary to find that the development is consistent with the requirements of this Plan.
<p>Incorporate sea level rise adaptation into redevelopment policies</p>	<p>This goal is addressed through the following policies:</p> <p>SR Policy 3.3.2: The District shall require permittees to site and design development to avoid impacts from coastal hazards from projected sea</p>

Goal	PMPU Consistency
	<p>level rise considering the anticipated life of the development, where feasible.</p> <p>a. If coastal hazards cannot be completely avoided, the District shall require planning, designing, and implementation of adaptation strategies, that:</p> <ol style="list-style-type: none"> 1. Address the hazards over the anticipated life of the development; 2. Protect coastal resources, public access, and recreational facilities, and 3. Minimize risks to life and property to the maximum extent feasible. <p>SR Policy 3.3.13: Appealable development shall be removed and the affected area restored to its previous or natural condition, or that appealable development shall apply additional coastal hazard adaptation strategies (such as those identified through the site-specific hazard report developed for SR Policy 3.3.1, if a report was developed for that site), if the development becomes subject to coastal hazards to the point that:</p> <ol style="list-style-type: none"> a. The District has ordered that the structures are no longer allowed to be occupied due to coastal hazards; b. The District has identified that critical services to the site (e.g., utilities, roads) can no longer be maintained; or c. The development requires new and/or augmented shoreline protective devices that are not in accordance with SR Policy 3.3.4, SR Policy 3.3.6, and SR Policy 3.3.9.
<p>Encourage the removal of development that is threatened by sea level rise</p>	<p>This goal is addressed through the following policies:</p> <p>SR Policy 3.3.13: Appealable development shall be removed and the affected area restored to its previous or natural condition, or that appealable development shall apply additional coastal hazard adaptation strategies (such as those identified through the site-specific hazard report developed for SR Policy 3.3.1, if a report was developed for that site), if the development becomes subject to coastal hazards to the point that:</p> <ol style="list-style-type: none"> a. The District has ordered that the structures are no longer allowed to be occupied due to coastal hazards; b. The District has identified that critical services to the site (e.g., utilities, roads) can no longer be maintained; or <p>The development requires new and/or augmented shoreline protective devices that are not in accordance with SR Policy 3.3.4, SR Policy 3.3.6, and SR Policy 3.3.9.</p>
<p>Use “soft” or “natural” solutions as a preferred alternative for protection of existing endangered structures</p>	<p>This goal is addressed through:</p> <p>SR Policy 3.3.4: The District and permittees shall prioritize implementation of nature based adaptation strategies for coastal resiliency as an alternative to the placement of shoreline protective devices, where feasible and applicable.</p>
<p>Allow bluff and shoreline protective devices only to protect existing endangered structures</p>	<p>This goal is addressed by limiting the situations in which shoreline protective devices can be used per:</p> <p>SR Policy 3.3.11: Appealable development that does not qualify for protection per SR Policy 3.3.3, SR Policy 3.3.6, and SR Policy 3.3.9 shall avoid the need for shoreline protective devices to avoid coastal hazards over the anticipated life of the development that may result from projected sea level rise.</p>
<p>Require special considerations for critical</p>	<p>This goal is addressed through:</p>

Goal	PMPU Consistency
infrastructure and facilities	SR Policy 3.3.3: Permittees of coastal-dependent port structures and supportive coastal related development that are essential to maritime functions, public safety, and security may implement shoreline protective devices or other adaptation strategies for the protection from, or accommodation of, coastal hazards.
Protect transportation infrastructure	<p>Like all future projects, transportation projects will be subject to:</p> <p>SR Policy 3.3.2: The District shall require permittees to site and design development to avoid impacts from coastal hazards from projected SLR considering the anticipated life of the development, where feasible.</p> <p>a. If coastal hazards cannot be completely avoided, the District shall require planning, designing, and implementation of adaptation strategies, that:</p> <ol style="list-style-type: none"> 1. Address the hazards over the anticipated life of the development; 2. Protect coastal resources, public access, and recreational facilities, and 3. Minimize risks to life and property to the maximum extent feasible.
Public Access and Recreation	
Maximize public access and recreational use by protecting beaches and other coastal areas	<p>This goal is addressed through the following policies:</p> <p>SR Policy 3.3.8: To improve coastal access, the District encourages incorporation of step-down areas into an existing shoreline protective device that abuts a sandy beach.</p> <p>SR Policy 3.3.6 The District and permittees may implement shoreline protective devices or other adaptation strategies for protection from, or accommodation of, coastal hazards for existing landside accessways and recreational facilities where no adjacent in-kind alternative landside accessway or recreational facility exists on Tidelands.</p> <p>SR Policy 3.3.7 If an existing landside accessway or recreational facility is deemed unsafe by the District because it has become permanently degraded by coastal hazards, the landside accessway or recreational facility shall be retrofitted or relocated by the District or permittee to the extent feasible, such that safe continuous coastal access will be maintained.</p> <p>SR Policy 3.3.10 When constructing, reconstructing, expanding, or replacing a shoreline protective device (per SR Policy 3.3.3, SR Policy 3.3.6, and SR Policy 3.3.9), the District shall require it be designed to:</p> <ol style="list-style-type: none"> a. Minimize adverse impacts on local shoreline sand supply; b. Minimize impacts on recreation, habitat, scenic views, beach width, and other coastal resources; c. Encourage inland expansion of protective devices rather than further fill of coastal waters to minimize resource impacts; and d. Not substantially impair coastal access or other Public Trust uses.
Protect lower cost visitor and recreational facilities and accessways	<p>This goal is addressed through the following policies:</p> <p>SR Policy 3.3.5: The District shall require new landside accessways and recreational facilities be sited and designed to the avoid impacts from coastal hazards and minimize environmental impacts while maximizing coastal access.</p> <p>SR Policy 3.3.7: If an existing landside accessway or recreational facility is deemed unsafe by the District because it has become permanently degraded by coastal hazards, the landside accessway or recreational facility shall be retrofitted or relocated by the District or permittee to the</p>

Goal	PMPU Consistency
	extent feasible, such that safe continuous coastal access will be maintained.
Foster efforts to better understand impacts of sea level rise	This goal is addressed through: SR Policy 3.2.1: The District shall participate in research that supplements its knowledge of projected coastal climate impacts and potential strategies to adapt to these impacts.
Coastal Habitats, ESHA, and Wetlands	
Protect, enhance, and restore sensitive habitats	This goal is addressed through: ECO Objective 1.1: Enhance, conserve, restore, and maintain the biodiversity in Tideland areas. ECO Policy 1.1.1: The District shall maintain marine resources in alignment with Section 30230 of the California Coastal Act. ECO Policy 1.1.2: The District shall prioritize and pursue opportunities for the protection, conservation, creation, restoration, and enhancement of sensitive habitats and State or Federally listed coastal species. ECO Policy 1.1.13: The District shall identify locations throughout the Bay that could support habitat enhancement, restoration, creation, and protection to benefit sensitive habitats and State and federally listed species. After specific locations are identified, the District shall: a. Explore opportunities for specific restoration, creation, enhancement, and mitigation banking projects in these areas; and b. Coordinate with resource agencies and regulatory agencies to permit projects that provide multiple benefits to Tideland areas. ECO Policy 1.1.14: Strive to achieve a net increase of wetland habitat acreage from baseline conditions throughout the Bay.
Avoid significant disruption to habitats	This goal is addressed through: ECO Policy 1.1.10: Development above the water or adjacent to sensitive habitat areas should use ecologically sensitive lighting that is shielded and directed away from the water or sensitive habitat areas, sensor activated, and of the lowest possible color temperature that also meets public safety requirements. ECO Policy 1.1.11: The District shall encourage the use of biologically engineered stormwater solutions to prevent degradation of coastal wetlands and marine ecosystems, and to reduce stormwater pollution to the Bay.
Avoid significant impacts on habitats from adjacent development	This goal is addressed through: ECO Policy 1.1.3: Future development adjacent to conservation areas and other sensitive habitats shall: a. Be coordinated, sited, and designed to avoid impacts where feasible or where legally required; if avoiding impacts is not feasible, or avoidance is not legally required, mitigate impacts in the following order of preference: 1. On-site; 2. In a mitigation bank; 3. In the same ecoregion with the Bay; 4. Elsewhere in the Bay; or 5. In the same watershed of the Coastal Zone; b. Require biological monitoring as determined by the District and/or the wildlife agencies; and

Goal	PMPU Consistency
	<p>c. When affecting disturbed sensitive habitat areas, restoration or enhancement must occur to the greatest extent feasible.</p> <p>ECO Policy 1.1.5: Landside development shall establish and maintain ecological buffers of 100 feet between the landside development and a saltmarsh wetland to preserve and protect the wetland habitat for the anticipated life of the development. The precise width of the buffer is to be based on the location, type of habitat. Exceptions to the width of ecological buffers area as follows:</p> <p>a. A reduced buffer to a minimum of 50 feet may be allowed pursuant to a site-specific analysis in coordination with the wildlife agencies. The site-specific analysis may include evaluation of current habitat that is degraded, nonfunctioning, of poor quality; or located immediately adjacent to existing development; or</p> <p>b. An ecological buffer shall not be required for wetland areas in an urbanized area if such buffer would cause displacement or removal of existing development.</p>
Manage sediment in ways that benefit habitats	<p>This goal is addressed through:</p> <p>ECO Policy 1.1.12: Science-based management practices shall be used on Tidelands to guide water, sediment, and natural resource decisions.</p>
Incorporate sea level rise into habitat management actions	<p>This goal is addressed through:</p> <p>ECO Policy 1.1.18: Adaptation strategies or other natural resource management practices shall be implemented to protect coastal habitats and ecosystem function under a range of future sea level rise and climate change scenarios.</p>
Agricultural Resources	
Protect the maximum amount of prime agricultural land	Not applicable. The District has no prime agricultural land.
Limit conversion of lands suitable for agriculture to nonagricultural uses	Under Coastal Act, aquaculture is considered agriculture and under the PMPU, the district is not converting aquaculture land uses to non-aquaculture land uses.
Minimize impacts on water quality that could result from agricultural practices	<p>This goal is addressed through:</p> <p>MM-BIO-6: Develop a Shellfish Aquaculture Mitigation Program in Coordination with the Appropriate Resource Agencies and the District to Minimize the Potential for Degraded Essential Fish Habitat and Potential Benthic Impacts</p>
Promote water conservation efforts	<p>This goal is addressed through:</p> <p>SR Policy 3.1.7: Development shall include water conservation strategies to save water and energy on-site, where feasible.</p>
Water Quality and Supply	
Control runoff and stormwater pollution	<p>This goal is addressed through:</p> <p>ECO Policy 2.3.1: Owners and operators of stormwater conveyances on Tidelands shall comply with the municipal stormwater permit (MS4) and other legal requirements to minimize pollution impacts in the Bay.</p> <p>ECO Policy 2.3.2: Educational information shall be provided to the public and tenants regarding natural resources protection, runoff or increased runoff flows, and pollution prevention measures to minimize or reduce impacts on water and sediment quality.</p>

Goal	PMPU Consistency
Minimize adverse effects of wastewater discharges and entrainment	ECO Policy 2.3.4: Permittees shall implement measures to prevent pollution impacts and adverse impacts from runoff flows from all development and maintenance activities.
Prevent depletion of groundwater supplies from saltwater intrusion	<p>This goal is addressed through:</p> <p>ECO Policy 2.1.9: Sewerage pump out facilities shall be accessible and available for use by the public either in fixed locations or through a mobile pump out service.</p> <p>This goal is addressed through:</p> <p>SR Policy 3.3.1: Permittees shall submit a site-specific hazard report to the District using best available science and considers best practices as provided by Federal, State, or regional guidance on coastal resiliency. At a minimum, the site-specific hazard report shall address anticipated coastal hazards over the anticipated life of the development, including, but not limited to inundation; flooding associated with storms of various return periods, including a 100-year storm; wave runup and overtopping; historic and projected future shoreline erosion; groundwater rise; saltwater intrusion; tsunamis; and changes to these hazards over time due to projected SLR at the site.</p> <p>For more discussions related to groundwater within the proposed PMPU area, see Section 4.8, <i>Hydrology and Water Quality</i>, and Section 4.15, <i>Utilities and Service Systems</i>.</p>
Improve long-term water quality through research	<p>This goal is addressed through:</p> <p>ECO Policy 2.1.5: The District shall continue to conduct, or require permittees to conduct, the long-term monitoring of water, sediment, eelgrass, birds, and marine life in the Bay.</p>
Archaeological and Paleontological Resources	
Protect archaeological and paleontological resources	As discussed in Sections 4.4, <i>Cultural Resources</i> , and 4.5, <i>Geology and Soils</i> , the proposed PMPU area may contain archaeological or paleontological resources, respectively. However, appropriate mitigation measures would be identified during site-specific review of future development to reduce potential impacts on these resources.
Scenic and Visual Resources	
Protect views to and along the ocean and scenic coastal areas	<p>This goal is addressed through:</p> <p>SR Policy 3.3.10: When constructing, reconstructing, expanding, or replacing a shoreline protective device (per SR Policy 3.3.3, SR Policy 3.3.6, and SR Policy 3.3.9), the District shall require it be designed to:</p> <ol style="list-style-type: none"> Minimize adverse impacts on local shoreline sand supply; Minimize impacts on recreation, habitat, scenic views, beach width, and other coastal resources; Encourage inland expansion of protective devices rather than further fill of coastal waters to minimize resource impacts; and Not substantially impair coastal access or other Public Trust uses. <p>WLU Objective 2.2: Implement new development in a manner that blends with and enhances the surrounding character and qualities.</p> <p>WLU Policy 3.2.1: Visual access locations (scenic vista areas, view corridor extensions, Window to the Bay, and walkways) shall be maintained and protected, as shown on the Chapter 5, Planning Districts: Coastal Access Views and Pathways Maps.</p>

Goal	PMPU Consistency
	<p>WLU Policy 3.2.2 Permittees of development shall preserve visual access through scenic vista areas, view corridor extensions, and walkways, in accordance with:</p> <ol style="list-style-type: none"> a. Chapter 4, Baywide Development Standards; b. Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict; and c. Chapter 5, Planning Districts applicable Coastal Access Views and Pathways Maps.

Future development within the proposed PMPU area would require a CDP. If sea level rise is a hazard to a proposed project, then it must be included in the project analysis to obtain a CDP. According to Chapter 6 of the CCC Sea Level Rise Policy Guidance, development projects should go through the following steps to address sea level rise risks:

1. Determine the project’s expected/proposed life.
2. Use these to pull the relevant sea level rise projections to be used in impact analyses.
3. Conduct a sea level rise impact analysis, looking at factors such as structural and geologic stability, erosion amount, flooding and inundation risks, and tipping points for sea level rise impacts specific to the project site.
4. Analyze impacts on coastal resources for current conditions and changes due to sea level rise and related impacts. These resources may include public access and recreation, water quality and surface and groundwater, coastal habitats, agricultural resources, natural landforms, and scenic resources. Overlay coastal resources with hazards to establish areas suitable for development and create site maps.
5. Conduct analysis of the proposed project and alternatives. Provide values for the amount of sea level rise used and its impacts on the proposed project and alternatives, identify current and future adaptation strategies, and identify avoidance and hazard minimization efforts through site maps.

Table 4.13-7 shows how the proposed PMPU’s policies will require future development to be consistent with the CDP steps in the CCC sea level rise guidance.

Table 4.13-7. PMPU Consistency with California Coastal Commission Sea Level Rise CDP Guidance

Guidance	Consistency
California Coastal Commission Sea-Level Rise Policy Guidance – Addressing Sea Level Rise in Coastal Development Permits	
Establish the sea level rise range for the proposed project.	<p>Consistent. The proposed PMPU SR Policy 3.3.1 directly requires future development to address this step by requiring that “Permittees shall submit a site-specific hazard report to the District using best available science and considers best practices as provided by Federal, State, or regional guidance on coastal resiliency...</p> <p>The following requirements apply to the site-specific hazard analysis for the report:</p> <ol style="list-style-type: none"> a. Using best available science and applicable regional, State, or Federal adaptation planning guidance documents, the analysis shall consider

Guidance	Consistency
Determine how sea level rise impacts may constrain the project site.	<p>multiple sea level rise scenarios and projections associated with the anticipated life of the development and, when applicable, identify potential future impacts on on-site natural resources...”</p> <p>Consistent. The proposed PMPU SR Policy 3.3.1 directly requires future development to address this step by requiring that “Permittees shall submit a site-specific hazard report to the District using best available science and considers best practices as provided by Federal, State, or regional guidance on coastal resiliency.</p> <p>At a minimum, the site-specific hazard report shall address anticipated coastal hazards over the anticipated life of the development, including, but not limited to inundation; flooding associated with storms of various return periods, including a 100-year storm; wave runup and overtopping; historic and projected future shoreline erosion; groundwater rise; saltwater intrusion; tsunamis; and changes to these hazards over time due to projected sea level rise at the site.”</p>
Determine how the project may impact coastal resources over time, considering sea level rise.	<p>Consistent. The proposed PMPU SR Policy 3.3.1 directly requires future development to address this step by requiring that “Permittees shall submit a site-specific hazard report to the District using best available science and considers best practices as provided by Federal, State, or regional guidance on coastal resiliency...”</p> <p>The following requirements apply to the site-specific hazard analysis for the report:</p> <ol style="list-style-type: none"> a. The analysis shall be conducted by a licensed engineer with experience in coastal processes and shall be submitted to the District for its review and approval. b. Using best available science and applicable regional, State, or Federal adaptation planning guidance documents, the analysis shall consider multiple sea level rise scenarios and projections associated with the anticipated life of the development and, when applicable, identify potential future impacts on on-site natural resources. c. The analysis shall identify threshold SLR amounts that could lead to impacts (e.g., the amount of SLR that could lead to overtopping of the proposed development). d. For development that does not meet the requirements that allow shoreline protective devices subject to SR Policy 3.3.3, SR Policy 3.3.6, or SR Policy 3.3.9, the hazard analysis shall be performed assuming no reliance upon future shoreline protective devices. e. If applicable, the report shall identify the coastal hazards that could trigger implementation of sea level rise adaptation strategies. If the development cannot fully minimize or avoid the impacts of coastal hazards for the anticipated life of the development, the report shall discuss possible adaptation responses to the hazards to reduce risk as feasible and mitigate impacts on coastal resources.” <p>In addition, SR Policy 3.3.2 states that “the District shall require permittees to site and design development to avoid impacts from coastal hazards from projected sea level rise considering the anticipated life of the development, where feasible.</p> <ol style="list-style-type: none"> a. If coastal hazards cannot be completely avoided, the District shall require planning, designing, and implementation of adaptation strategies, that: <ol style="list-style-type: none"> 1. Address the anticipated life of the development;

Guidance	Consistency
Identify project alternatives to both avoid resource impacts and minimize risks to the project.	<ol style="list-style-type: none"> 2. Protect coastal resources, public access, and recreational facilities, and 3. Minimize risks to life and property to the maximum extent feasible.” <p>Consistent. SR Policy 3.3.2 directly requires that future development address this step by stating that “the District shall require permittees to site and design development to avoid impacts from coastal hazards from projected sea level rise considering the anticipated life of the development, where feasible.</p> <ol style="list-style-type: none"> a. If coastal hazards cannot be completely avoided, the District shall require planning, designing, and implementation of adaptation strategies, that: <ol style="list-style-type: none"> 1. Address the hazards over the anticipated life of the development; 2. Protect coastal resources, public access, and recreational facilities, and 3. Minimize risks to life and property to the maximum extent feasible.”
Finalize project design and submit permit application.	<p>Consistent. SR Policy 3.3.1 (f) directly requires that future development address this step by stating that “as part of Coastal Act approval, the District shall review the report and require the development to implement the recommendations in the report and/or any other siting and design adaptation measures that the District determines are necessary to find that the development is consistent with the requirements of this Plan.”</p>

As shown in the tables and analysis above, the proposed PMPU is consistent with the CCC’s sea level rise policy guidance. Therefore, implementation of the proposed PMPU, which would entail future projects that are proposed consistent with its policies and development standards, would not result in an inconsistency with the sea level rise guidance of the CCC. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction and operation of a Waterfront Destination Park. The implementation of this option would result in the loss of existing parking along North Harbor Drive to accommodate the new Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to consistency with the applicable policies of the CCC 2018 Sea Level Rise Policy Guidance.

The development that could occur under Option 1 would have to be consistent with the proposed PMPU sea level rise policies, which are consistent with the CCC Sea Level Rise Policy Guidance adaptation strategy goals and CDP guidance. Therefore, future development under Option 1 would be consistent with the applicable sea level rise policies of the CCC 2018 Sea Level Rise Policy Guidance. Impacts would be less than significant, and implementation of Option 1 would not result in any additional or more severe impacts than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreational Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to consistency with the applicable policies of the CCC 2018 Sea Level Rise Policy Guidance.

The development that could occur under Option 2 would have to be consistent with the proposed PMPU sea level rise policies, which are consistent with the CCC Sea Level Rise Policy Guidance adaptation strategy goals and CDP guidance. Therefore, future development under Option 2 would be consistent with the sea level rise policies of the CCC 2018 Sea Level Rise Policy Guidance. Impacts would be less than significant, and implementation of Option 2 would not result in any additional or more severe impacts than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU would result in a less-than-significant impact related to consistency with the applicable policies of the CCC 2018 Sea Level Rise Policy Guidance.

The development that could occur under Option 3 would have to be consistent with the proposed PMPU sea level rise policies, which are consistent with the CCC Sea Level Rise Policy Guidance adaptation strategy goals and CDP guidance. Therefore, future development under Option 3 would be consistent with the applicable sea level rise policies of the CCC 2018 Sea Level Rise Policy Guidance. Impacts would be less than significant, and implementation of Option 3 would not result in any additional or more severe impacts than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to potential inconsistencies with the applicable sea level rise policies of the CCC 2018 Sea Level Rise Policy Guidance adopted for the purpose of avoiding or mitigating an environmental effect from sea level rise. As discussed under Threshold 1, the proposed PMPU policies listed in Section 4.13.4.3 would require both the District and future permittees (i.e., project proponents) to address sea level rise using adaptation strategies. For example, SR Policy 3.2.3 requires the District to prepare, and periodically update, a sea level rise adaptation plan that includes several components, including but not limited to: considers the best available science and applicable regional, State, and Federal adaptation planning guidance; provides recommendations for adapting structures and facilities, coastal access, etc.; and explores the potential for nature-based sea level rise adaptation strategies. By periodically updating the adaptation plan, the District would ensure that the latest sea level rise projections are being used to identify and mitigate potential risks to coastal resources.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result in an inconsistency with the applicable policies of the CCC 2018 Sea Level Rise Policy Guidance adopted for the purpose of avoiding or mitigating an environmental effect from sea level rise. Impacts would be less than significant.

4.13.5 Cumulative Impact Analysis

A cumulatively considerable contribution to cumulative sea level rise impact would occur if the proposed PMPU would exacerbate projected future conditions associated with sea level rise when combined with the past, present, and probable future plans and programs identified in Table 2-2 in Chapter 2, *Environmental Setting*. A cumulatively considerable contribution to cumulative sea level rise impact would also occur if the proposed PMPU, when evaluated within the context of past, present, and probable future plans and programs, would be inconsistent with the applicable sea level rise policies of the CCC, resulting in a cumulatively considerable physical impact on the environment.

4.13.5.1 Geographic Scope

The geographic scope of analysis for cumulative sea level rise impacts includes the area encompassed by the past, present, and probable future plans and programs identified in Table 2-2 that are situated along the entirety of the bayfront.

4.13.5.2 Cumulative Effects From Past, Present, and Probable Future Projects

Projected sea level rise is expected to increase the number of areas that experience coastal flooding along San Diego Bay. Coastal and low-lying areas are particularly vulnerable to future sea level rise, especially in combination with future storm events and coastal flooding. As discussed above, the District prepared the *Sea Level Rise Vulnerability Assessment and Coastal Resiliency Report*, which was presented to the Board of Port Commissioners in June 2019 (District 2019). This document provides cumulative projections (Table 4.13-1 above), which take into account global GHG emission projections.

Several plans, policies, guidance, and regulations related to sea level rise have been adopted and/or passed at the State level, the most notable for the District being the CCC Sea Level Rise Policy Guidance for plans and development within the District's jurisdiction. Development associated with present and probable future plans and programs within the geographic scope are all within the Coastal Zone, therefore they would be required to demonstrate consistency with the CCC Sea Level Rise Policy Guidance during project-specific environmental review. This guidance provides a framework for addressing sea level rise in LCPs and CDPs for addressing sea level rise in the Coastal Zone. Because the past, present, and probable future plans and programs within the geographic scope would be required to comply with all applicable State plans, policies, and regulations related to sea level rise (e.g., AB 691, AB 2516, California Coastal Act), cumulative effects related to sea level rise would not be significant.

4.13.5.3 Project Contribution

As discussed under Threshold 1, future development allowed under the proposed PMPU would not exacerbate any existing and/or projected damage to the environment, including existing structures, sensitive resources, and human health, due to sea level rise. Given to its coastal location, the proposed PMPU area is vulnerable to future sea level rise and storm surge events. When 100-year floodflows coincide with high tides, on top of future sea level rise, the risk of flooding of future development within the proposed PMPU area increases. As shown in Table 4.13-3, almost all land use designations, and the future development that could occur within them, would be exposed to some degree of flooding under 0.25 meter of sea level rise during average daily conditions (approximately 2030). Additionally, Commercial Recreation, Institutional/Roadway, Marine Terminal, and Recreation Open Space land use designations and associated future development are likely to experience a substantial number of acres exposed to flooding under higher levels of sea level rise, particularly starting at 0.75 meter of sea level rise (approximately 2100). These effects are worsened when combined with a 100-year storm event, as shown in Table 4.13-4. Future development and any associated new shoreline protective devices within these land use designations could increase the risk of flooding and erosion on neighboring properties and adjacent natural habitats. Coastal protection measures deflect wave energy to adjacent areas rather than

dampen it. Additionally, armored shorelines generally lack the rich structural complexity necessary for coastal ecosystems to establish themselves.

The proposed PMPU includes several policies intended to reduce or avoid risks posed by sea level rise and storm surge through the use of adaptation strategies. These policies require, among other things, the District to prepare, and periodically update, a sea level rise adaptation plan (SR Policy 3.2.3) and permittees (i.e., project proponents) to submit a site-specific hazards report to the District that addresses anticipated coastal hazards over the anticipated life of the development (SR Policy 3.3.1). Other policies require permittees to site and design development to avoid impacts from coastal hazards from projected sea level rise considering the anticipated life of the development, and, if coastal hazard cannot be completely avoided, to plan, design, and implement adaptation strategies (see SR Policy 3.3.2). Nature-based solutions shall be prioritized as an alternative to the placement of shoreline protective devices when considering adaptation strategies for development (see SR Policy 3.3.4). If shoreline protective devices are used, they must be designed to minimize adverse impacts on local sand supply, recreation, habitat, scenic views, beach width, coastal fill, and impacts on coastal access and other Public Trust uses (SR Policy 3.3.10). Sea level rise and increased “storminess” due to climate change may increase wave uprush, which would be analyzed on an individual development basis, as required in SR Policy 3.3.1. Specific design approaches would be reviewed by the District as specific development proposals are submitted for development review. All future development allowed under the proposed PMPU would be required to demonstrate consistency with the proposed PMPU policies related to sea level rise. Moreover, any flooding would occur irrespective of any future PMPU-related development. As such, the proposed PMPU would not exacerbate the potential for inundation due to projected sea level rise or storm surge.

As discussed under Threshold 2 and shown in Tables 4.13-5, 4.13-6, and 4.13-7 the proposed PMPU would be consistent with the sea level rise policies of the CCC 2018 Sea Level Rise Policy Guidance. Therefore, the proposed PMPU would not be inconsistent with the applicable sea level rise policies of the CCC 2018 Sea Level Rise Policy Guidance. Notably, a significant cumulative sea level rise effect from past, present, and probable future plans and programs within the geographic scope for cumulative sea level rise impacts does not exist. Therefore, the proposed PMPU’s contribution to cumulative sea level rise impacts would not be cumulatively considerable.

4.13.5.4 Cumulative Impact Determination and Mitigation

The proposed PMPU’s incremental contribution to sea level rise impacts would not be cumulatively considerable.

Section 4.14

Transportation, Circulation, and Mobility

4.14.1 Overview

This section describes the existing conditions and laws and regulations related to transportation, circulation, and mobility, followed by an analysis of the proposed Port Master Plan Update’s (PMPU’s) potential to (1) conflict with a program, plan, ordinance, or policy addressing the circulation system; (2) conflict or be inconsistent with California Environmental Quality Act (CEQA) Guidelines Section 15064.3, subdivision (b); (3) substantially increase hazards because of a geometric design feature or incompatible uses; or (4) result in inadequate emergency access.

The information provided in this section is summarized from the *Port Master Plan Update Transportation Impact Study (TIS) Vehicle Miles Traveled – SB 743 Analysis* prepared by Chen Ryan Associates in February 2020 (Appendix D). For a discussion and analysis of parking as it relates to public access pursuant to the California Coastal Act, please see Section 4.9, *Land Use and Planning*. In addition, the proposed PMPU does not propose any changes to industrial land uses or marine terminal uses within the PMPU area and does not propose any increase in related operations. Therefore, transportation impacts associated with industrial land uses and cargo operations related to marine terminals are not analyzed in this Draft Program Environmental Impact Report (PEIR). For an analysis of transportation-related impacts of growth at the Tenth Avenue Marine Terminal (TAMT), please see the *TAMT Redevelopment Plan and Demolition and Initial Rail Component Final Environmental Impact Report* (TAMT EIR, December 2016).

Table 4.14-1 summarizes the significant impacts and mitigation measures (MMs) discussed in Section 4.14.4.4, *Project Impacts and Mitigation Measures*.

Table 4.14-1. Summary of Significant Transportation Impacts and Mitigation Measures

Summary of Significant Impact(s)	Applicable Planning Districts	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact TRA-1: Increase in Total VMT Associated with Future Development Consistent with the Proposed PMPU	PD1, PD2, PD3, PD8, PD9, and PD10	<p>MM-TRA-1: Establish a Transportation Impact Fee Program</p> <p>MM-TRA-2: Contribute Fair Share Impact Fees</p> <p>MM-TRA-3: Implement a Transportation Demand Management Plan</p>	Significant and Unavoidable	Implementation of MM-TRA-1 , MM-TRA-2 , and MM-TRA-3 would reduce total VMT; however, because the timing and location of future development and infrastructure is unknown a reduction below a level of significance cannot be guaranteed.

Summary of Significant Impact(s)	Applicable Planning Districts	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact TRA-2: Increase in VMT/Employee Associated with Future Development Consistent with the Proposed PMPU	PD2	MM-TRA-1, MM-TRA-2, and MM-TRA-3 (described above)	Significant and Unavoidable	Implementation of MM-TRA-1, MM-TRA-2, and MM-TRA-3 would reduce VMT/Employee; however, because the timing and location of future development and infrastructure is unknown a reduction below a level of significance cannot be guaranteed.
Impact TRA-3: Increase in VMT Due to Transportation Infrastructure Improvements Associated with the Proposed PMPU	PD1, PD2, PD3	MM-TRA-1, MM-TRA-2, and MM-TRA-3 (described above)	Significant and Unavoidable	Implementation of MM-TRA-1, MM-TRA-2, and MM-TRA-3 would reduce VMT due to transportation infrastructure improvements; however, because the timing and location of future development and infrastructure is unknown a reduction below a level of significance cannot be guaranteed.
Impact-C-TRA-1: Cumulative Increase in Total VMT	PD1, PD2, PD3, PD8, PD9, and PD10	MM-TRA-1, MM-TRA-2, and MM-TRA-3 (described above)	Significant and Unavoidable	Implementation of MM-TRA-1, MM-TRA-2, and MM-TRA-3 would reduce cumulative total VMT; however, because the timing and location of future development and infrastructure is unknown, a reduction to a level below significance cannot be guaranteed.
Impact C-TRA-2: Cumulative Increase in VMT/Employee	PD2	MM-TRA-1, MM-TRA-2, and MM-TRA-3 (described above)	Significant and Unavoidable	Implementation of MM-TRA-1, MM-TRA-2, and MM-TRA-3 would reduce cumulative VMT/Employee; however, because the timing and location of

Summary of Significant Impact(s)	Applicable Planning Districts	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact C-TRA-3: Cumulative Increase in VMT Due to Transportation Infrastructure Improvements	PD1, PD2	MM-TRA-1, MM-TRA-2, and MM-TRA-3 (described above)	Significant and Unavoidable	future development and infrastructure is unknown, a reduction below a level of significance cannot be guaranteed. Implementation of MM-TRA-1, MM-TRA-2, and MM-TRA-3 would reduce VMT due to cumulative transportation infrastructure improvements; however, because the timing and location of future development and infrastructure is unknown a reduction below a level of significance cannot be guaranteed.

4.14.2 Existing Conditions

Regional and local roadways, public transit systems, and bicycle/pedestrian facilities surrounding and within the proposed PMPU area are maintained by the respective municipal governments, including the San Diego Unified Port District (District), City of San Diego, City of Coronado, and City of Imperial Beach. Freeway facilities, which are outside of the proposed PMPU area, are within the jurisdiction of the California Department of Transportation (Caltrans). The following includes a detailed description of all transportation facilities in and around the proposed PMPU area.

4.14.2.1 Existing Transportation Conditions

Regional Facilities

Regional access to the proposed PMPU area is provided by the interstate and state freeway systems, which are under Caltrans’ jurisdiction. The following freeways provide access to the planning area.

- Interstate (I)-5 provides both regional and national transit in a north-to-south route along the west coast, extending from the United States/Mexico border to the Washington State border with Canada. I-5 runs adjacent, or in proximity, to Planning District (PD) 2, PD3, PD4, and PD7.
- State Route (SR)-75 connects Downtown San Diego from I-5 to Coronado via the San Diego-Coronado Bay Bridge, and continues through Coronado and down the Silver Strand, terminating at the city limits of Imperial Beach. SR-75 provides access to PD4, PD8, PD9, and PD10.

- SR-15 begins just southeast of PD4 and travels in a northward direction. The southern terminus of SR-15 is at S. 32nd Street, which provides direct access to E. Harbor Drive. E. Harbor Drive serves as primary access to PD4.

Local Facilities

Roadways

There are several main roadways that traverse through the proposed PMPU area and provide access to the waterfront and adjacent Tidelands. Table 4.14-2 identifies each of the main roadways providing access through the planning area.

Table 4.14-2. Local Roadways

Roadway	Direction
PD1	
Harbor Drive	north-south
Shelter Island Drive	north-south
Nimitz Boulevard	east-west
PD2	
Harbor Island Drive	north -south
Harbor Drive	north-south
PD3	
Pacific Highway	north-south
PD4	
Harbor Drive	north-south
PD8	
Seacoast Drive	north-south
PD9	
Silver Strand Boulevard (SR-75)	north-south
PD10	
Silver Strand Boulevard (SR-75)	north-south

Public Transportation Services

Regional public transportation serving all or portions of the proposed PMPU area includes the COASTER commuter train, the San Diego Trolley, and local bus lines. Planned public transportation services are based on the San Diego Association of Governments' (SANDAG) adopted *San Diego Forward: The Regional Plan*, which identifies planned transit improvements that enhance access in the San Diego Downtown area and surrounding communities through the year 2050.

COASTER Commuter Train

The North County Transit District (NCTD) owns and operates the COASTER commuter train, which travels over a 41-mile route with eight stations along the San Diego coastline, extending between Oceanside and Downtown San Diego. The COASTER operates more than 125 trains each week,

carrying about 4,915 passengers each weekday, totaling 1.5 million trips annually (NCTD 2019). The closest COASTER station to the proposed PMPU area is at the Santa Fe Depot, which is adjacent to PD3 to the east.

Amtrak Pacific Surfliner

Amtrak provides passenger rail service from San Diego to several destinations throughout the state and country. The main route serving San Diego is the Pacific Surfliner, which connects most of the major cities along California's coast, from San Diego in the south to San Luis Obispo in the north. The Pacific Surfliner served 2,654,800 riders in 2018 (RPA 2019). Amtrak currently accesses the Downtown San Diego area via Santa Fe Depot, which is located on the northwest corner of the Broadway and Kettner Boulevard intersection, adjacent and east of PD3. Amtrak riders can transfer to the San Diego Trolley system and bus routes from the Santa Fe Depot stop.

San Diego Trolley

The San Diego Trolley is a wholly owned subsidiary of the Metropolitan Transit System (MTS) and serves over 32 million annual passengers, with an average weekday ridership of 97,401 (MTS 2013). The San Diego Trolley system consists of four lines, including the UC San Diego Blue, Orange, Sycuan Green, and SDG&E Silver Lines, with a total of 53 stations and 54.3 miles of rail (MTS 2016). Each train consists of between one and four cars depending on need. Each car can hold between 96 and 104 passengers during commute times and up to 200 passengers during special events (referred to as *crush load*). The highest estimates of passengers during special events assumes all passengers are standing up with very little space between them. Assuming a four-car train, this equates to between 384 and 416 passengers during commute times, and up to 800 passengers during special events.

Blue Line

The MTS Blue Line was the first light-rail line constructed in San Diego and was the start of the MTS Trolley System. In operation since 1981, the Blue Line began with service between Downtown San Diego and the San Ysidro Port-of-Entry. Blue Line service has been expanded four times since its inception and now provides service between the San Ysidro Port-of-Entry to the south and the Old Town Transit Center to the north. In total, the Blue Line currently services 15.4 miles and includes 18 stations. However, construction is currently under way to extend the Blue Line north to the University City community, also referred to as the Mid-Coast Corridor, and will serve major activity centers such as the University of California San Diego and Westfield UTC. Service is anticipated to begin in 2021 (SANDAG 2018).

The Blue Line currently runs at 7- to 8-minute headways during peak periods and 15-minute headways in off-peak periods. The Blue Line America Plaza stop is adjacent to (i.e., within 0.25 mile) of PD3; the 12th and Imperial stop, the Barrio Logan stop, and the Harborside stop are adjacent to PD4.

Orange Line

The MTS Orange Line was the second light-rail line implemented as part of the San Diego Trolley system. Service began in 1986, with the line operating between Downtown San Diego and Euclid Avenue to the east. Since its inception, the Orange Line has undergone four expansions, allowing service to now run between Downtown San Diego in the west and Gillespie Field (El Cajon) in the east. In total, the Orange Line services 18 miles and includes 19 stations.

In the Downtown San Diego area, the Orange Line operates along the C Street and Park Boulevard alignment prior to heading east toward the cities of Lemon Grove, La Mesa, and El Cajon. The Orange Line currently runs at 15-minute headways during peak periods and 30-minute headways in off-peak times. SANDAG's Regional Plan identifies frequency enhancements for the Orange Line by the year 2035. The Orange Line America Plaza stop is adjacent to PD3.

Green Line

The MTS Green Line was the third light-rail line implemented as part of the San Diego Trolley system. In the Downtown San Diego area, the Green Line operates along the east side of Pacific Highway until Market Street and then along the northeast side of Harbor Drive. The Green Line operates a 15-minute service Monday through Saturday and a 30-minute service on weekend mornings, Sundays, and evenings. In total, the Green Line services 23.6 miles and includes 27 stations.

Service began in 2005, when the 5.9-mile gap between Mission San Diego and Grossmont Transit Center was connected and operations began between Santee Town Center and Old Town. Additionally, the northern terminus of the Blue Line was reestablished at the Old Town Transit Center, and the Orange Line's eastern terminus was modified to serve the Gillespie Field Station. In September 2012, the Green Line was extended through Old Town and now terminates at 12th and Imperial via the Seaport Village, San Diego Convention Center, and Gaslamp Quarter stations. The Green Line Washington Street and Middletown stops are adjacent to PD2; the County Center/ Little Italy, Santa Fe Depot, America Plaza, Seaport Village, Convention Center, and Gaslamp Quarter stops are adjacent to PD3; and the 12th and Imperial stop is adjacent to PD4.

Silver Line

The SDG&E Silver Line is a 2.7-mile loop through Downtown San Diego that is traveled by a restored 1946 PCC streetcar, also referred to as the Vintage Trolley, operated by MTS. The Silver Line first began operation on August 27, 2011. The Silver Line Vintage Trolley departs from the 12th and Imperial Station along the Green Line to America Plaza and then along the Blue/Orange Line back to 12th and Imperial Station. The Silver Line Vintage Trolley operates on a limited schedule and currently departs every 30 minutes during select hours on Friday through Sunday. The entire Downtown loop takes approximately 30 minutes to complete. The Silver Line has four stops adjacent to PD3, including the Seaport Village, Convention Center, Gaslamp Quarter, and 12th and Imperial Stations.

Local/Express Bus Services

Several MTS bus routes serve the proposed PMPU area, with several bus stops located in, or adjacent to, each of the planning districts. PD2, PD3, and PD10 have several bus stops within their boundaries, while the boundaries of PD1, PD4, PD8, and PD9 are adjacent to multiple MTS bus stops.

Ferry/Water Taxi

In addition to the aforementioned landside transit services, the following waterside transit services are provided within the proposed PMPU area.

- **Ferry:** Provides service between the Coronado and the San Diego Convention Center. There are ferry stops located in PD3 and PD10. Specifically, PD3 includes the Broadway Pier stop and the

Convention Center stop (5th Avenue Landing), and the Coronado Ferry Landing is located within PD10.

- Water Taxi: Provides prearranged services for a minimum of 20 people at a time in the areas of Downtown San Diego, Coronado, and Point Loma in San Diego Bay. The water taxi stops are located in PD1, PD2, PD3, and PD10.

Pedestrian and Bicycle Facilities

The Bayshore Bikeway is a 24-mile regional bicycle facility consisting of bike paths and bike routes that circumnavigate the Bay. The Bayshore Bikeway travels through, or is adjacent to, four of the planning districts: PD3, PD4, PD9, and PD10. All of the planning districts except for PD7 and PD9 have Class I, II, or III bicycle facilities, within or adjacent to the planning district boundaries. Class I facilities are off-street, paved bike paths; Class II facilities are bike lanes that are generally identified as a separate lane of a roadway; and Class III facilities are bike routes that are shared with vehicles along a roadway (City of San Diego 2013).

Additional Mobility Options

In addition to public transit services and facilities, there are several other mobility options available throughout the proposed PMPU area that are provided by private entities. These generally include for-profit ride-share, bike-share, and scooter-share options. The availability of these options is subject to market conditions and can vary throughout the proposed PMPU area. A select number of shared mobility device operators are authorized/permitted for a 6-month period in the City of San Diego. Five micro-mobility providers were authorized to operate in the City of San Diego for the August 2020 to January 2021 period. Shared mobility device companies are not permitted in the City of Coronado.

Transit Priority Areas

A Transit Priority Area (TPA) is defined as an area within a 0.5-mile radius of an existing or planned major transit stop,¹ if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program (Public Resources Code [PRC] Section 21099). Additionally, Section 15064.3 of the State CEQA Guidelines also takes into consideration existing stops along a high quality transit corridor.² Section 15064.3, Subdivision (b)(1) indicates that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses proposed within a TPA) would have a less-than-significant impact on vehicle miles traveled (VMT). Areas that meet the screening criteria below would be assumed to have a less-than-significant impact and therefore would not require mitigation. Areas not meeting the screening criteria would be further evaluated to determine if they would be associated with a transportation related impact based on their associated VMT generation. As noted in the Governor's Office of Planning and Research (OPR) Technical Advisory, projects

¹ PRC Section 21064.3: "Major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods."

² PRC Section 21155: "For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours."

within a TPA are generally presumed to have a less-than-significant VMT impact unless any of the following conditions are met:

- Has a Floor Area Ratio (FAR) less than 0.75.
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking).
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization).
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

4.14.3 Laws, Regulations, Plans, and Policies

4.14.3.1 State

Senate Bill 743

Governor Jerry Brown signed Senate Bill (SB) 743 on September 27, 2013, which mandated a change in the way that public agencies evaluate transportation impacts of projects under CEQA, focusing on VMT rather than level of service (LOS) and other delay-based metrics. SB 743 states that new methodologies under CEQA are needed for evaluating transportation impacts that are better able to reduce greenhouse gas (GHG) emissions and traffic-related air pollution, promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations. It further intended to balance the need for LOS standards with the State's need to build infill housing and mixed-use commercial developments within walking distance of mass transit facilities and downtowns or town centers. SB 743 allowed for measurements of transportation impacts that could include VMT, VMT per capita, automobile trip generation rates, or automobile trips generated. Accordingly, SB 743 required the OPR to amend the State CEQA Guidelines to reflect these changes.

State CEQA Guidelines Section 15064.3

In response to SB 743, the OPR added Section 15064.3 of the State CEQA Guidelines, as part of a comprehensive Guidelines update, adopted by the California Natural Resources Agency in December 2018. Section 15064.3 describes specific considerations for evaluating a project's transportation impacts and identifies VMT as the most appropriate measure to determine the significance of transportation impacts. Section 15064.3 generally states that a project's effect on automobile delay shall not constitute a significant environmental impact under CEQA. The specific criteria for analyzing transportation impacts are provided in Section 15064.3, subdivision (b) of the State CEQA Guidelines.

Technical Advisory on Evaluating Transportation Impacts in CEQA

In response to SB 743 and the addition of Section 15064.3 to the State CEQA Guidelines, the OPR adopted the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory) in December 2018 to provide technical recommendations on methods for assessing VMT, thresholds

of significance, and mitigation measures. The recommendations in the Technical Advisory are intended to provide guidance to agencies and the public for assessing VMT-related transportation impacts under CEQA. Details of the recommended thresholds of significance from the Technical Advisory are provided in Section 4.14.4.2, *Thresholds of Significance*, below.

Executive Order B-48-18: Zero-Emission Vehicles

On January 26, 2018, Governor Brown signed Executive Order B-48-18 requiring all State entities to work with the private sector to have at least 5 million zero-emission vehicles (ZEVs) on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a *Plug-in Charging Station Design Guidebook* and update the 2015 *Hydrogen Station Permitting Guidebook* (Eckerle and Jones 2015) to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan, along with the 2018 ZEV Action Plan Priorities Update, which includes and extends the 2016 ZEV Action Plan (Governor's Interagency Working Group on Zero-Emission Vehicles 2016, 2018), to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. The GHG benefits of these provisions have not been accounted for in the impact analyses below.

Executive Order N-79-20: Zero Emission Drayage Vehicles

Governor Gavin Newsom signed Executive Order N-79-20 in September 2020, which sets a statewide goal that 100 percent of all new passenger car and truck sales in the state will be zero-emissions by 2035. It also sets a goal that 100 percent of statewide new sales of medium- and heavy-duty vehicles will be zero emissions by 2045, where feasible, and calls for all new sales of drayage trucks to be zero emissions by 2035. Additionally, the Executive Order targets 100 percent of new off-road vehicle sales in the state to be zero emission by 2035. CARB is responsible for implementing the new vehicle sales regulation. The GHG benefits of these provisions have not been accounted for in the impact analyses below.

4.14.3.2 Regional

San Diego Association of Governments

San Diego Forward: The Regional Plan

SANDAG's *San Diego Forward: The Regional Plan* (Regional Plan) was adopted by the SANDAG Board of Directors on October 9, 2015, to establish a long-range blueprint for the San Diego region's growth and development through the year 2050. The Regional Plan was developed in close partnership with the region's 18 cities and San Diego County government, and aims to provide innovative mobility choices and planning to support a sustainable quality of life in a healthy region with a vibrant economy. The Regional Plan integrates both the 2004 Regional Comprehensive Plan and the 2050 Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) into one unified plan. By incorporating the SCS, the Regional Plan is in compliance with SB 375, which identifies how the region will address GHG emissions to meet State-mandated levels and focuses on

land use planning and transportation issues in an attempt to develop sustainable growth patterns on a regional level.

California State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP). The requirements within the State CMP were developed to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates for the State CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the State CMP, and, since this decision, SANDAG has been abiding by 23 Code of Federal Regulations (CFR) 450.320 to ensure the region's continued compliance with the Federal congestion management process. The Regional Plan is the region's long-range transportation plan and SCS, and meets the requirements of 23 CFR 450.320 by incorporating the following Federal congestion management process: performance monitoring and measurement of the regional transportation system, multimodal alternatives and non-single occupant vehicle analysis, land use impact analysis, the provision of congestion management tools, and integration with the regional transportation improvement program process.

State law requires the RTP to be updated every 4 years. The State of California established climate mandates for regional planning organizations across the state in 2018, and the SANDAG Board of Directors approved a 2-year extension to develop the 2021 Regional Plan. A Draft 2021 Regional Plan was released for public review in spring 2021.

Riding to 2050, the San Diego Regional Bike Plan

Riding to 2050, the San Diego Regional Bike Plan (Regional Bike Plan) was developed to support the 2004 Regional Comprehensive Plan and the 2050 RTP in implementing the regional strategy for utilizing bicycles as a valid form of everyday travel. The Regional Bike Plan, as part of the SCS mandated by SB 375, provides for a detailed Regional Bike Network, as well as the programs that are necessary to support it. Implementation of the Regional Bike Plan would help the region meet its goals for reducing GHG emissions and improve mobility.

Airport Connectivity Steering Committee

The Airport Connectivity Subcommittee was established by the SANDAG Board of Directors on December 21, 2018, to study ways to modernize and improve access to the San Diego International Airport (SDIA). The Airport Connectivity Subcommittee is tasked to advise SANDAG and consists of the following member agencies:

- City of Poway
- City of San Diego
- County of San Diego
- Metropolitan Transit System (MTS)
- North County Transit District (NCTD)
- SANDAG
- San Diego County Regional Airport Authority

- San Diego Unified Port District
- Caltrans
- Navy Region Southwest, U.S. Department of Defense

The Airport Connectivity Subcommittee identified high-level concepts to improve transit connectivity to SDIA for SANDAG's Board of Directors. The concepts must be consistent with the San Diego County Regional Airport Authority's (Airport Authority) Airport Development Plan (ADP) and its Draft PEIR, as well as the District's PMPU and this Draft PEIR. In March 2019, the SANDAG Airport Connectivity Subcommittee directed SANDAG staff to focus on either the Space and Naval Warfare Systems (SPAWAR) site (approximately 200 acres in size), or the Intermodal Transit Center (ITC) Site (approximately 106 acres in size), as potential sites for a longer-term San Diego Grand Central Station concept. On September 25, 2019, this Subcommittee recommended approval of the conceptual transportation solutions for improved transit and road connectivity, for further study and environment analysis. The SANDAG Board of Directors approved the study and environmental analysis on September 27, 2019.

Caltrans Manual on Uniform Traffic Control Devices

Construction in rights of way subject to Caltrans Encroachment Permit requirements, typically require a Traffic Control Plan in compliance with the Manual on Uniform Traffic Control Devices. As part of these requirements, there are provisions for coordination with local emergency services, training for flagman for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, detours for bike lanes on roads with lane closures of one travel direction, and vehicle storage and staging areas for emergency vehicles. Requirements also provide for construction work during off-peak hours and flaggers.³

4.14.3.3 Local

The proposed PMPU area is within the land use jurisdiction and control of the District. However, because the public streets and intersections serving the proposed PMPU area are maintained by the adjacent cities, local laws, regulations, and plans are included below in addition to District regulations.

San Diego Unified Port District

North Harbor Drive Mobility and Access Study

Based on direction from the Airport Authority Board, the Airport Authority initiated the Harbor Drive Mobility Committee (Airport Committee) in June 2017 to identify strategies that would improve traffic flow and reduce congestion around the SDIA, as part of their ADP. The Airport Committee's organization included a Policy Group to evaluate the technical analysis and provide policy-level recommendations, as well as a Working Group to generate ideas and alternatives based on research and technical analysis. Two Board of Port Commissioners served on the Airport

³ The Manual on Uniform Traffic Control Devices is available online at <https://dot.ca.gov/programs/safety-programs/camutcd>.

Committee’s Policy Group, and several District staff participated in the Airport Committee’s Working Group.

The District volunteered to complete a comprehensive mobility and access study for the North Harbor Drive corridor in alignment with the expanded study scope suggested by the representatives of the regional agencies participating in the Airport Committee Working Group. With the collaboration of all the participating agencies, the District’s North Harbor Drive Mobility and Access Study could serve as a foundation for identifying potential improvements for additional feasibility analysis, potential cost sharing arrangements, and/or pursuing future funding opportunities.

In December 2018, the Board of Port Commissioners (Board) accepted the District’s North Harbor Drive Mobility and Access Study, which identified mobility-related improvements that could help accommodate preliminary growth projections contemplated by the proposed PMPU, the SDIA’s ADP, and the surrounding Community Plans in the City of San Diego. While the mobility-related improvements identified in the District’s study were not binding on any agency, the study helped generate interest within the region to address long-term mobility challenges associated with North Harbor Drive and the SDIA.

South Harbor Drive Multimodal Corridor Study

The Integrated Planning Framework Report (November 2015) served as the “bridge” between the Vision Statement and Guiding Principles that were accepted by the District Board for the proposed PMPU in August 2014, and the goals and policies established in the proposed PMPU’s discussion draft that was circulated for public comment in April 2019. One of the comprehensive ideas identified in the Framework Report was a “Haul Road” concept along the District’s working waterfront. In November 2017, the District initiated the South Harbor Drive Multimodal Corridor Study (South Harbor Drive Study) to further advance the haul road concept by building a holistic regional vision for the working waterfront segment of Harbor Drive. The study’s scope was intentionally broadened to consider pedestrian, bicycle, transit, parking, and other single-passenger vehicular issues in addition to studying ways to accommodate truck traffic within the corridor. As such, the South Harbor Drive Study’s purpose is to “[i]dentify opportunities to improve mobility, safety and quality of life for everyone who lives, works or plays along Harbor Drive and in the surrounding communities near San Diego’s working waterfront.”

The South Harbor Drive Study area includes the segment of Harbor Drive between the TAMT and the National City Marine Terminal (NCMT), as well as major east-west arterial roadways from Harbor Drive and the interstate highway access points. Staff from the following agency partners comprise the South Harbor Drive’s Technical Working Group:

- California Coastal Commission
- Caltrans
- City of San Diego
- City of National City
- MTS
- SANDAG
- San Diego Air Pollution Control District (SDAPCD)

- San Diego Unified Port District
- United States Department of the Navy (Navy Base San Diego)

The corridor's key mobility challenges have been identified, and over a hundred discrete improvement options have been identified and considered by the Technical Working Group. After a comprehensive public outreach effort with residents, businesses, and other key stakeholders during the Fall 2019, the study was completed. On December 10, 2019, the District Board heard the conclusions and the recommendations of the South Harbor Drive Study, which it accepted.

The study found that no single improvement could adequately address all the corridor's mobility challenges. Rather, the corridor requires a system of complementary improvements to enhance all modes of mobility, including freight, passenger vehicles, truck traffic, transit opportunities, pedestrian and bicycle connectivity. The South Harbor Drive Study organized these improvements into five distinct geographical areas and identified broader corridor-wide improvements. Based on collaboration with agency stakeholders, the study included preliminary design concepts for the following two projects:

- Harbor Drive 2.0
- National City Truck Parking along Tidelands Avenue

The District Board considered furthering improvements to the corridor with the Harbor Drive 2.0 concept.

Tenth Avenue Marine Terminal Redevelopment Plan

In December 2016, the District Board approved the Sustainable Terminal Capacity Alternative as the maximum amount of cargo throughput at TAMT, which was analyzed in the certified TAMT EIR (December 2016; SCH# 2015-031046).⁴ The TAMT EIR included a full analysis of transportation and greenhouse gas emission impacts and is incorporated by reference.

The TAMT Redevelopment Plan provides laydown space and flexibility for each cargo type. The plan envisions three distinct cargo nodes within the existing footprint of the terminal and is focused on the following current core specialties:

- Project, roll-on/roll-off, and break-bulk cargo such as military equipment, wind energy parts, shipbuilding steel, and vehicles.
- Refrigerated containers for fresh produce such as bananas or other produce.
- Dry bulk cargo such as soda ash, aggregate and cement, used primarily in construction.

The plan includes a variety of infrastructure improvements that would be phased over time. Phase 1, also referred to as the TAMT Modernization Plan, is the only phase the District currently has scheduled. The scheduled work includes:

- Demolishing two transit sheds.
- Sitework improvements including earthwork, utilities, site lighting and pavement.
- 7,200 square feet of new modular buildings to house office space, utility enclosures, and restrooms.

⁴ Available at <https://www.portofsandiego.org/projects/tenth-avenue-marine-terminal-redevelopment>.

- On-dock rail improvements.

Future phases of the redevelopment plan include:

- Increasing consolidated dry bulk storage capacity, which may include a new, 100,000-square-foot dry bulk structure or an equivalent vertical storage facility.
- Making enhancements to the existing conveyor system.
- Demolishing the existing molasses tanks.
- Demolishing Warehouse C.
- Creating additional storage space.
- Updating on-dock rail facility.
- Installing up to five gantry cranes (cranes on a rail).

City of San Diego

Downtown Community Plan—Mobility Section

The Mobility section of the Downtown Community Plan establishes a street system within Downtown San Diego through a hierarchy of roadway types, including Greenways, Cycleways, Transitways, Autoways, and Multi-Function Streets. The Mobility section replaced the previous Transportation section of the Downtown Community Plan, which was amended along with the adoption of the Downtown Mobility Plan in June 2016. In addition to the street system, the Mobility section provides goals and policies for pedestrian and bicycle movement, transit systems, parking, and transportation demand management. The Downtown San Diego Mobility Plan identifies numerous improvements for providing a balanced, multimodal network (Civic San Diego 2016).

Street Design Manual

The City's *Street Design Manual* (2002) provides information and guidance for the design of public right-of-way that accommodates a variety of potential users, including motorists, pedestrians, and bicyclists. The *Street Design Manual* is divided into six sections: Roadway Design, Pedestrian Design, Traffic Calming, Street Lighting, Parkway Configurations, and Design Standards. The guidelines are focused on the development of new or undeveloped areas as well as redeveloping areas and are not intended to supersede other guidelines developed in other local planning documents, such as community plans, specific plans, and RTPs.

Bicycle Master Plan

The City of San Diego Bicycle Master Plan (2002) and Bicycle Master Plan Update (2013) provide a framework for making cycling a more practical and convenient transportation option for San Diegans with different riding purposes and skill levels. The Bicycle Master Plan is a 20-year policy document that guides the development and maintenance of San Diego's bicycle network. The bicycle network includes all roadways that bicyclists have the legal right to use, support facilities, and non-infrastructure programs. The plan includes direction for policymakers on the expansion of the existing bikeway network, connecting gaps, addressing constrained areas, improving intersections, providing for greater local and regional connectivity, and encouraging more residents to bicycle

more often. The 2013 update builds on the 2002 version by addressing changes to the bicycle network and overall infrastructure.

Pedestrian Master Plan

The Pedestrian Master Plan (City of San Diego 2006) provides guidelines to the City of San Diego that will enhance neighborhood quality and mobility options through the facilitation of pedestrian improvement projects. The Pedestrian Master Plan both identifies and prioritizes pedestrian improvement projects through technical analysis and community input programs, which are typically grant-funded.

Municipal Code Section 129.0702

City of San Diego Municipal Code Section 129.0702 requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects, construction projects, and other work which encroaches into the public right-of-way, including sidewalks. The permit requires the preparation and submittal of a traffic control plan that must conform to the 2014 California Manual on Uniform Traffic Control Devices and Standard Specifications for Public Works Construction, including Regional Supplemental Amendments and City of San Diego Supplemental Amendments.

City of Imperial Beach

Bicycle Transportation Plan

The City of Imperial Beach Bicycle Transportation Plan (2008) was prepared as a comprehensive update to the 1994 City of Imperial Beach General Plan and Coastal Plan's Circulation Element to better address not only local bicycle travel needs, but also to better serve regional long-distance travel and promote eco-tourism. The Bicycle Transportation Plan objectives include establishing facility types to be implemented and identifying points where the City of Imperial Beach's bikeway system could integrate with the existing San Diego metropolitan regional bikeway system. The plan's scope included documenting and evaluating Imperial Beach's existing bikeway facility system and its relationship to other systems such as mass transit, and recommending improvements wherever appropriate.

Municipal Code Section 12.04.020

City of Imperial Beach Municipal Code Section 12.04.020 states "[e]xcept as may otherwise be expressly provided by ordinance of the City, no work shall be performed in any public right-of-way of the City without the person, firm or corporation which is going to perform the work or which is going to cause the work to be performed first having obtained a permit from the Director of Public Works of the City authorizing the performance of the work." Work within the public right-of-way in the City of Imperial Beach requires a Temporary Encroachment Permit.

City of Coronado

Comprehensive Active Transportation Plan and Complete Streets Strategy

The City of Coronado approved the *Comprehensive Active Transportation Plan and Complete Streets Strategy* in September 2018. The Active Transportation Plan (ATP) includes a Bicycle Master Plan, a Pedestrian Master Plan, and a Safe Routes to School Plan. The ATP includes goals and potential

future projects designed to enhance Coronado's bike routes, streets, and sidewalks to be more accessible, safe, and comfortable for visitors of all ages and abilities. The Draft ATP was developed to comply with the Caltrans Active Transportation Program in order to be eligible for Active Transportation grant funds for the construction of transportation projects.

Municipal Code Section 52.08

Section 52.08 of the City of Coronado Municipal Code outlines the requirements for Encroachment Permit applications for any private, permanent/fixed improvements proposed within the public right-of-way, and outlines the process for the City Engineer to receive and review applications for encroachments, stating that and no such application shall be approved if a determination is made that the encroachment structure will adversely affect the public health, safety, or general welfare.

Municipal Code Section 52.10

Under Section 52.10 of the City of Coronado Municipal Code, it is unlawful for anyone to place, remove, or replace any item within the public right-of-way or on public property or to do any work in the public right-of-way or on public property without first having obtained a Right-of-Way Permit. A Right-of-Way Permit is required for all work on public property, such as repairs to sidewalks, curbs and gutters, driveway aprons, and parkways (the area between the sidewalk and the curb); or to place equipment in the public right-of-way, such as a crane placed in the street to transport materials to a second story. A Right-of-Way Permit authorizes a contractor to temporarily occupy the public right-of-way for construction of said improvement. Section 52.10.060 includes specific requirements for traffic control around the work site. Permittees are required to place and maintain all necessary barrier, guards, lights, signs, flagmen, and watchmen to adequately control vehicular and pedestrian traffic around the work site and to advise the public of detours and construction hazards. Such control devices must be installed to the satisfaction of the City Engineer; and where the permittee fails to satisfactorily control traffic and warn of safety hazards, the City Engineer may require additional control devices to be erected at the expense of the permittee.

4.14.4 Project Impact Analysis

4.14.4.1 Methodology

Potential transportation and circulation impacts associated with the proposed PMPU are summarized below based upon information contained in Appendix D of this Draft PEIR. Methods used to determine impacts are based in part on the OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory), as well as input from the District and its consultants. The SB 743 framework was developed for this analysis. For more details related to the methods used, please see Chapter 2 of Appendix D. Additional discussion of methodology is provided below under the individual impact analyses.

Construction

The proposed PMPU provides goals and policies, as well as water and land use classifications, consistent with the San Diego Unified Port District Act (Port Act) and Public Trust Doctrine, for the physical development and conservation of District Tidelands. As such, the PMPU does not propose

any site-specific physical development, but rather provides guidelines for future development throughout the 30-year planning horizon. The timing, location, and scale of future site-specific development are unknown at this time. Therefore, potential construction-related traffic impacts are analyzed at a general level in this Draft PEIR and are considered qualitatively; types of construction-related traffic hazards are considered and compared to the existing conditions of the proposed PMPU area.

For the purposes of analyzing construction-related VMT impacts as a result of implementation of the proposed PMPU, the analysis qualitatively considers the potential change in existing VMT conditions in the proposed PMPU area due to construction jobs, taking into account projected population and labor market growth.

Operation

Transportation Network VMT Metrics

Project-related VMT refers to the number of automobile trips and their associated travel distance. For land use development projects, OPR recommends three VMT-based metrics to determine if a project has a significant transportation related impact:

- *VMT/Capita* includes all vehicle-based person trips grouped and summed to the home location of individuals who are drivers or passengers on each trip. It includes both home-based and non-home-based trips. The VMT for each home is then summed for all homes in a particular census tract and divided by the population of that census tract to arrive at VMT/Capita. However, because residential land uses are not permitted within the District's jurisdiction, this metric was not used to determine project-related VMT impacts.
- *VMT/Employee* includes all vehicle-based person trips grouped and summed to the work location of individuals on the trip. This includes VMT associated with detours made during the work commute (e.g., additional stops at coffee shops, dry cleaners, grocery stores). The VMT for each work location is then summed for all work locations by census tract and then divided by the total number of employees of that census tract to arrive at the VMT/Employee. This metric is used for future development that would have worker commute trips associated with it, such as hotels, restaurants, and marine terminal workers.
- *Total VMT* is the sum of all vehicle trips generated in an area multiplied by their associated trip lengths. This total includes all the generated vehicle miles for Internal-to-Internal (I-I), Internal-to-External (I-E), and External-to-Internal (E-I) trips in the area. For this analysis, the Total VMT was calculated for each planning district.

VMT Analysis Tool

The SANDAG Series 13 Activity Based Model (ABM)⁵ was customized for the District's jurisdictional area to incorporate the land use and transportation network changes proposed by the PMPU. The ABM is a travel demand forecasting model that incorporates census data and travel surveys to inform the algorithms of the model's projections. It uses a simulated population based on existing

⁵ Additional details of the SANDAG Series 13 Activity Based Model, including development and validation and calibration are available at https://www.sandag.org/index.asp?subclassid=120&fuseaction=home.subclasshome#ModelIntegration_

and projected demographics, to match residents to employment, and forecasts the daily travel on the regional transportation network. In addition, the model tracks the daily travel of individuals in the simulated population, including origins, destinations, travel distances, and mode choices. The Series 13 ABM has four forecast scenarios: Base Year 2012, which provides a forecast of the year the model inputs (land uses, mobility network, and socio-economic data) are based on, two interim years (2020 and 2035), and Horizon Year 2050. The Year 2020, 2035 and 2050 scenarios are derived based on the planned land uses and mobility improvements within the region, as well as population and employment projections. The different components of the proposed PMPU are projected to be implemented over 30 years with a buildout year of 2050. Although future development is expected to occur over an approximately 30-year period, the timing, location, and scale of individual development projects are unknown and will depend on future market conditions and other factors that also are not yet known. Therefore, it would be speculative to assume a level of development in interim years and the analysis in this section evaluates potential impacts associated with full buildout of future development allowed under the PMPU in 2050. Finally, it should be noted that the water and land uses specifically within the proposed PMPU area were assumed to be constructed to their buildout assumptions under Horizon Year 2050 conditions.

To calculate both the VMT/Employee and the Total VMT generated within each planning district, the proposed PMPU land uses were coded into their respective Transportation Analysis Zones (TAZs), and transportation network changes were also coded throughout the District's jurisdiction. The origin and destinations of trips generated within each planning district were tracked using a model select zone assignment, which was used to calculate the VMT per employee and total VMT for each planning district. The total VMT generated within the planning district was calculated based on the total number of trips (all trip types) generated by District land uses multiplied by the route distance between them. VMT/Employee was calculated by summing the Total VMT generated specifically by employees within each planning district and then dividing by the total number of jobs⁶ within the same planning district. VMT is then compared to the thresholds used to determine significance, described below. As noted in Table 4.14-3, the VMT per employee threshold is applied to uses such as office, industrial, and hotel.

Impacts associated with VMT from retail uses were derived by comparing two SANDAG model scenarios. One version of the model included full buildout of the proposed PMPU land uses. The other version included full buildout of the proposed PMPU land uses with the exception of the retail uses, which remained consistent with the existing level. The total VMT generated by each planning district between the two models was used to isolate the net VMT associated with the proposed retail development. As shown in Table 4.14-3, a significant retail-related VMT impact would occur if there is a net increase in total VMT within the planning district, as it would indicate that the proposed retail uses would not be locally serving. Additional details on the VMT modeling are included in Appendix D, and input and output files are available upon request.

Mobility Hubs

As described in Chapter 3, *Project Description*, planning district standards would introduce mobility hubs in PD1, PD2, PD3, PD8, and PD10. A *mobility hub* is defined as a connection point in which visitors and workers accessing areas on tidelands are provided the opportunity to change from one

⁶ Total number of jobs was derived from the SANDAG Series 13 model. The SANDAG model projects the number of total jobs, under each horizon year, based on the projected/programmed land uses and the State's population growth projections.

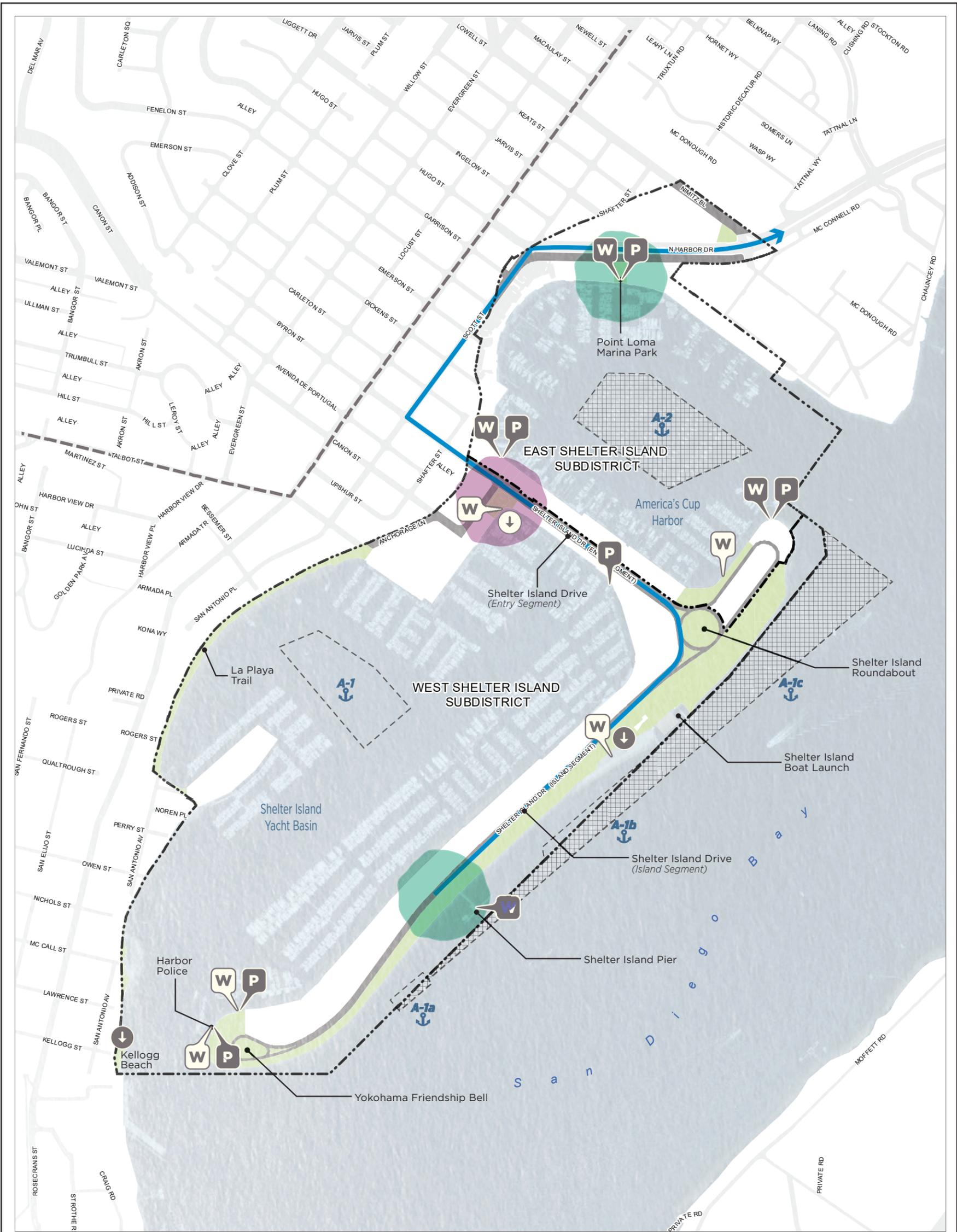
mode of travel to another, as necessary, to reach their destination. A mobility hub includes, but is not limited to, landside modes—transit, personal auto, rideshare, biking, walking, and micro-mobility options—and water-based transit modes—water taxis, small craft vessels, and ferries. A mobility hub includes both water and landside connections where feasible. Mobility hubs are not defined by their physical footprint, but by their relationship, amenities, and connections with the surrounding area. There are three types of mobility hubs proposed as part of the planning district standards, which are described below and outlined in Table 4.14-3. The potential locations, sizes, and service areas for each planned mobility hub are provided in Chapter 5, *Planning Districts*, of the proposed PMPU, and are depicted by planning district in Figures 4.14.-1 through 4.14-7. For ease of reference, types of mobilities hubs are defined here.

A **Regional Mobility Hub** is intended to serve visitors and employees as they access and travel throughout Tidelands. They are intended to be used to consolidate public parking in the area, which will allow for existing on-street and/or surface parking to be repurposed as Recreation Open Space, such as esplanades, promenades, and plazas, and to connect to multimodal facilities, dedicated transit lanes, bicycle facilities (Class II Bike Lanes, Class IV Cycle Tracks, or Class I Multi-Use Paths), and other waterfront uses. Regional Mobility Hubs will help to reduce the amount of vehicle miles traveled throughout Tidelands and potentially in areas adjacent to Tidelands as they may connect to other regional mobility networks.

A **Local Gateway Mobility Hub** connects visitors to a group of attractions and other uses in a small and specific area. Local Gateway Mobility Hubs are intended to both draw visitors to Tidelands and act as a connection point for visitors who are already traversing Tidelands using other modes of transportation.

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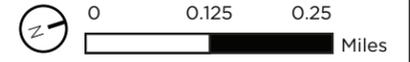
Jurisdictional Boundaries	Landside Access	Water Access
Planning Subdistricts	Local Gateway Mobility Hub	Water-Based Transfer Point
Coastal Zone	Connector Mobility Hub	W Existing W Potential
Not Within District Permitting Authority	Potential Bayfront Circulator Route	Short-Term Public Docking
Other		P Existing P Potential
Recreation Open Space		Hand-Launched Non-Motorized Watercraft Launch Area
Anchorage		↓ Existing ↓ Potential

Figure 4.14-1
Proposed Transportation Facilities
In Planning District 1: Shelter Island
Port Master Plan Update



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Jurisdictional Boundaries

- Planning Subdistricts
- Coastal Zone
- Not Within District Permitting Authority
- Other**
- Recreation Open Space
- Anchorage

Landside Access

- Regional Mobility Hub
- Local Gateway Mobility Hub
- Potential Bayfront Circulator Route

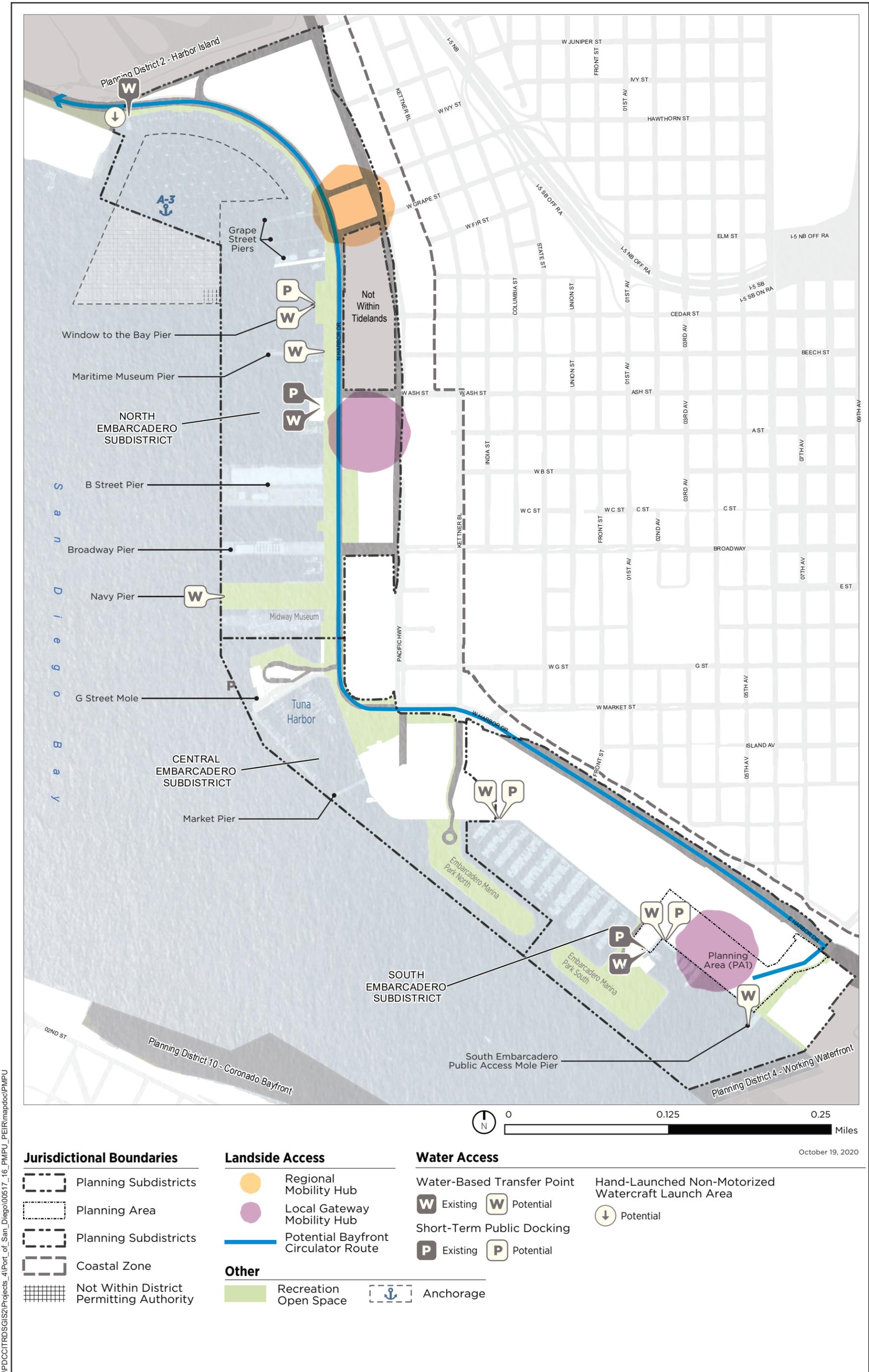
Water Access

- Water-Based Transfer Point**
- Existing Potential
- Short-Term Public Docking**
- Existing Potential
- Hand-Launched Non-Motorized Watercraft Launch Area**
- Existing Potential



**Figure 4.14-2
Proposed Transportation Facilities
In Planning District 2: Harbor Island
Port Master Plan Update**

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- Jurisdictional Boundaries**
- Planning Subdistricts
 - Planning Area
 - Planning Subdistricts
 - Coastal Zone
 - Not Within District Permitting Authority

- Landside Access**
- Regional Mobility Hub
 - Local Gateway Mobility Hub
 - Potential Bayfront Circulator Route
- Other**
- Recreation Open Space
 - Anchorage

- Water Access**
- Water-Based Transfer Point**
 - Existing Potential
 - Short-Term Public Docking**
 - Existing Potential

- Hand-Launched Non-Motorized Watercraft Launch Area**
- Potential

**Figure 4.14-3
Proposed Transportation Facilities
In Planning District 3: Embarcadero
Port Master Plan Update**



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Jurisdictional Boundaries

-  Planning Subdistricts
-  Coastal Zone

Other

-  Recreation Open Space

Water Access

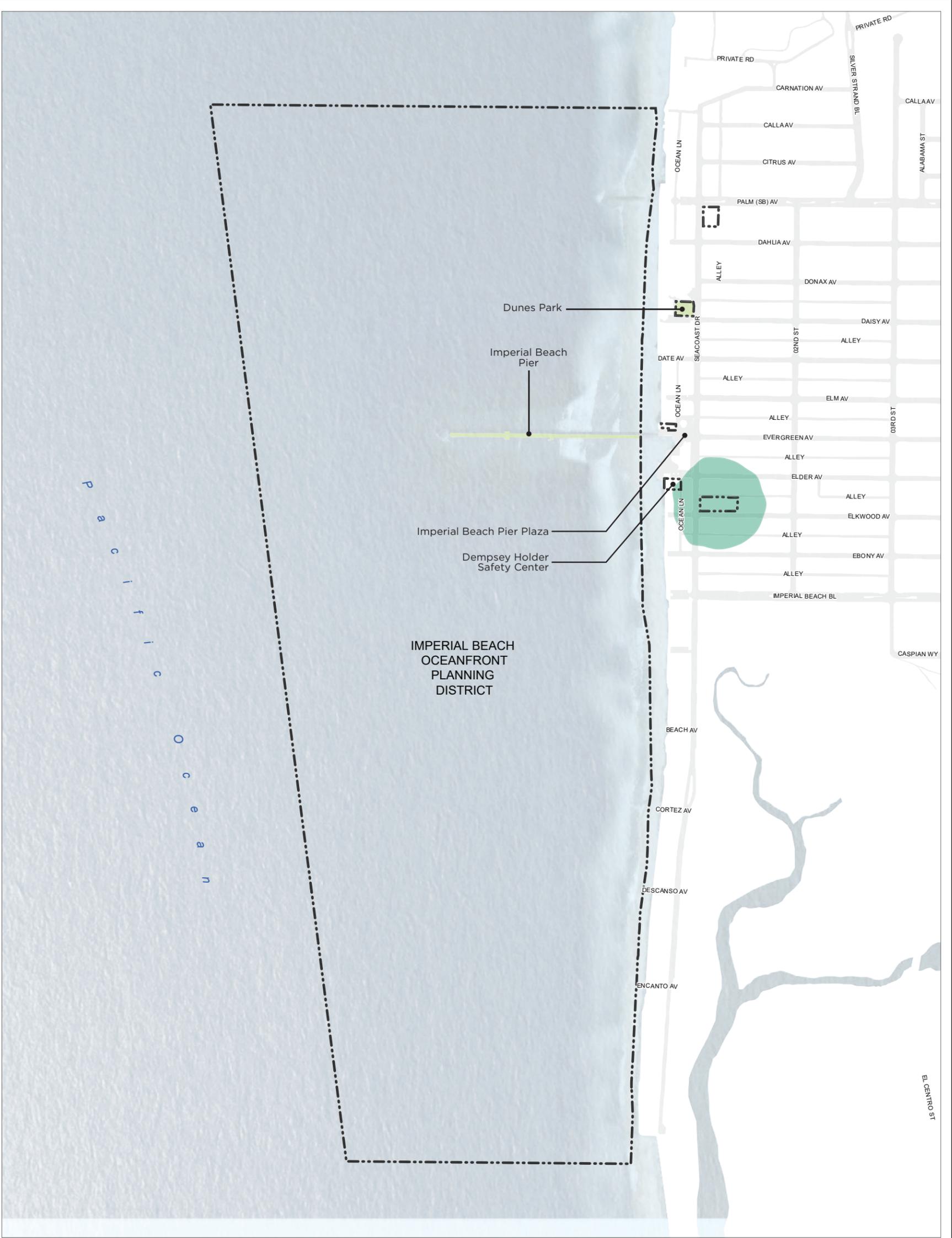
-  Water-Based Transfer Point
-  Potential

Figure 4.14-4
Proposed Transportation Facilities
In Planning District 4: Working Waterfront
Port Master Plan Update



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Jurisdictional Boundaries

Planning District

Other

Recreation Open Space

Landside Access

Connector Mobility Hub



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Figure 4.14-5
Proposed Transportation Facilities
In Planning District 8: Imperial Beach Oceanfront
Port Master Plan Update

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- Jurisdictional Boundaries**
- Planning Subdistricts
 - Not Within District Permitting Authority
- Other**
- Recreation Open Space
 - Anchorage

- Landside Access**
- Connector Mobility Hub

- Water Access**
- Water-Based Transfer Point
 - Existing
 - Potential
 - Short-Term Public Docking
 - Existing
 - Potential



October 19, 2020



Figure 4.14-6
Proposed Transportation Facilities
In Planning District 9: Silver Strand
Port Master Plan Update

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Jurisdictional Boundaries

- Planning Subdistricts
- Coastal Zone
- Not Within District Permitting Authority
- Other**
- Recreation Open Space
- Anchorage

Landside Access

- Local Gateway Mobility Hub

Water Access

- Water-Based Transfer Point**
- Existing Potential
- Short-Term Public Docking**
- Existing Potential
- Hand-Launched Non-Motorized Watercraft Launch Area**
- Existing

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**Figure 4.14-7
Proposed Transportation Facilities
In Planning District 10: Coronado Bayfront
Port Master Plan Update**

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Table 4.14-3. Mobility Hub Requirements

Size	Accessibility Requirements					Amenities					
	Transit	Roadway	Walking	Biking	Waterside	Amenities Required	Parking	Curbside Management	Micro-Mobility	Information	Commercial
Regional Gateway	Direct connection to a Regional Transit Stop (Trolley or MTS Bus Stop) Incorporation of a Bayfront Circulator stop (PD1, PD2, PD3)	Takes access from a major roadway that provides a connection to the regional highway system roadway	75% of the attractions within a 0.5-mile radius are accessible through a quality walk ¹ Provides wayfinding signage to key destinations	Provides a direct bicycle connection (Level of Traffic Stress 2 or better) to the regional bicycle network Provides bike parking	Provides a connection to one or more waterside facilities (transient vessel docking and/or waterside transit service)	4	Consolidates parking for public destinations (open space, recreation, public art) within the catchment area (0.5 mile) ² Offsite parking for leasehold destinations (retail, restaurants, hotels) can also be consolidated in mobility hubs ²	220 feet (10 car lengths) of dedicated linear curb length	Coordination with Micro-Mobility providers to ensure consistent service and supply Inclusion of Micro-Mobility hub with charging facilities and dedicated staging area	Signage and/or kiosks providing information on the available transportation modes, prices, near-by destinations, multimodal trip mapping, ticket vending, and wait time information	Small scale visitor serving uses such as restaurants, coffee shops and markets.
Local Gateway	Access to a local transit stop. Incorporation of a Bayfront Circulator stop (PD1, PD2, PD3)	Takes access from a public roadway	75% of the attractions within a 0.25-mile radius are accessible through a quality walk ¹ Provides wayfinding signage to key destinations	Provides a direct bicycle connection (Level of Traffic Stress 2 or better) to the regional bicycle network Provides bike parking	Provides connections to waterside facilities (transient vessel docking and/or waterside transit service), if available	3	Within 500 feet of off-street public parking. May consolidate parking for public destinations (open space, recreation, public art) within the catchment area ² Offsite parking for leasehold destinations (retail, restaurants, hotels) may also be consolidated in the mobility hub ²	110 feet (5 car lengths) of dedicated linear curb length	Coordination with Micro-Mobility providers to ensure consistent service and supply Dedicated staging area from Micro-Mobility related vehicles	Signage and/or kiosks providing information on the available transportation modes, near-by destinations, and trip mapping ³	Onsite or adjacent small-scale visitor-serving uses, such as restaurants, coffee shops, and/or visitor-serving retail or kiosks
Connection Point	Access to a local transit stop Incorporation of a Bayfront Circulator stop (PD1, PD2, PD3)	Takes access from a public roadway	Provides a direct connection, through a quality walk, ¹ for all destinations within the immediate area Provides wayfinding signage to key destinations	Provides bike parking	Provides connections to waterside facilities (transient vessel docking and/or waterside transit service), if available	2	Parking is not required, but is allowed	66 feet (3 car lengths) of dedicated linear curb length	Coordination with Micro-Mobility Providers to ensure service and supply	Signage and/or kiosks providing information on the available transportation modes, near-by destinations, and trip mapping ³	No commercial requirements

¹ Quality walk: Contiguous, non-circuitous, walking route with a Pedestrian Environment Quality Evaluation (PEQE) score of fair or good. PEQE score is based on the physical characteristics of the pedestrian facility, including safety, lighting, and separation from roadway.

Source: Active Travel Assessments Integrating Bicycle and Pedestrian Evaluation in Long Range Planning, City of San Diego, December 2015.

² Parking demand study would be required to determine the number of spaces that need to be included in the hub.

³ Trip mapping services provide information on the various transportation modes in which a user can use to reach their destination, and locations in which they can change their modes, if desired (example: google maps).

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A Connector Mobility Hub connects visitors to a specific attraction or use. Connector Mobility Hubs are generally smaller than the other types of hubs and do not typically include vehicular parking or need to be linked to any parking facilities. They should generally be designed to organize converging transportation facilities through wayfinding signage, bicycle, and pedestrian improvements and the provision of transportation amenities.

4.14.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining the significance of transportation, circulation, and mobility impacts resulting from implementation of the proposed PMPU. The determination of whether a transportation, circulation, and mobility impact would be significant is based on the thresholds described below and the professional judgment of the District as the Lead Agency based on the evidence in the administrative record.

Impacts are considered significant if the proposed PMPU would result in any of the following:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system.
2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).
3. Substantially increase hazards because of a geometric design feature or incompatible uses.
4. Result in inadequate emergency access.

4.14.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policies would have the potential to reduce or avoid impacts associated with the transportation system as a result of implementation of the proposed PMPU and are considered in the impact analysis that follows.

WLU Policy 3.1.1 A network of pathways and water-based transfer points shall connect the comprehensive waterfront open space network and public realm areas on Tidelands.

WLU Policy 3.1.2 The District—independently, assigned through partnerships with the District, or through CDPs issued by the District—shall plan, design, and implement a comprehensive waterfront open space network that provides access to and throughout the public realm on Tidelands and enhances proximate connections to the water for the public and priority coastal uses. These improvements shall be developed in accordance with:

- a. Chapter 4, Baywide Development Standards; and
- b. Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

WLU Policy 3.1.3 The District and its permittees shall maintain, protect, and enhance existing public coastal-dependent recreational facilities, such as boat ramps and piers that provide coastal access.

WLU Policy 3.1.4 Permittees of coastal-enhancing development shall provide direct access to the water's edge and increase physical accessibility to the water by providing overlooks, step-down

areas, or similar opportunities for the public to access the water, especially in areas where those opportunities do not exist.

WLU Policy 3.1.5 Protect and, where feasible, expand waterside amenities, such as water based transfer points, overnight transient docking, free or lower cost short-term public docking, anchorages, launch areas for nonmotorized watercraft, and boat launch facilities.

WLU Policy 3.1.6 A waterside promenade shall be provided as part of development that abuts the waterfront, in accordance with:

- a. Chapter 4, Baywide Development Standards; and
- b. Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

WLU Policy 3.1.7 Non waterside development with obstructed public access shall provide physical connections (e.g., walkways) to the water, in accordance with:

- a. Chapter 4, Baywide Development Standards; and
- b. Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

M Policy 1.1.8 The District shall coordinate with agencies that have transportation authority, and with adjacent jurisdictions and permittees, to plan mobility infrastructure in support of the safe movement of people and/or goods. Specific transit improvements included in this Plan are outlined in Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict.

M Policy 1.1.9 The District shall coordinate with agencies that have transportation authority to explore opportunities to expand accessible transit service to Tidelands. Specific transit improvements included in this Plan are outlined in Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict.

M Policy 1.1.10 The District shall provide areas for transit stops and transit lanes for expanded transit opportunities on Tidelands and explore a means for financing expanded transit opportunities with agencies that have transportation authority. Specific transit improvements included in this Plan are outlined in Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict.

M Policy 1.1.11 The District shall develop Transportation Demand Management (TDM) guidelines and require development to comply with such guidelines, with the intent to reduce dependence on single-occupancy vehicles and reduce vehicle miles traveled to, from, and within Tidelands. All proposed development shall also be required to provide a project-specific TDM program in accordance with the District's guidelines.

M Policy 1.1.12 Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for a variety of users to access the public realm. These improvements shall be developed in accordance with:

- a. Chapter 4, Baywide Development Standards; and
- b. Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

M Policy 1.1.13 Shared or personal motorized mobility devices, except for those required for Americans with Disabilities Act purposes, shall not be permitted on facilities on which pedestrians are intended to travel, such as sidewalks, promenades, multi-use pathways (without a dedicated bicycle area), nature trails, and walkways.

M Policy 1.1.14 The District shall coordinate with agencies that have transportation authority to enhance coastal connectivity and access throughout Tidelands, particularly at mobility hub locations.

M Policy 1.1.15 Through CDPs issued by the District, permittees shall provide public access points along the Bay and may collaborate and coordinate with agency partners and adjacent jurisdictions to plan for, design, and reinforce linkages between those public access points and off-Tidelands areas.

M Policy 1.1.16 Through CDPs issued by the District, permittees shall advance as part of development, when feasible, the implementation of zero-emission/near-zero-emission mobility options and supportive infrastructure improvements for the movement of people in alignment with District sustainability and maritime clean air strategies.

M Policy 1.1.17 The District may expand the summer shuttle service (Big Bay Shuttle) that operates along Harbor Drive, establishing year-round connections between Shelter Island and the Convention Center, as a mobility priority (refer to Figure 3.2.4, Bayfront Circulator).

M Policy 1.1.18 Development, adjacent to the bayfront circulator route as shown in Figure 3.2.4, Bayfront Circulator, shall provide hubs or stops to support operation of the bayfront circulator.

M Policy 1.1.19 The District shall prepare a curbside management program that will provide strategies and guidelines for the use of curb space along corridors fronted by predominantly commercial uses.

M Policy 1.1.20 Development shall implement curbside management strategies in accordance with the District's curbside management program, once established.

M Policy 1.1.21 The District – independently or in collaboration with other agencies with transportation authority and adjacent jurisdictions and permittees – may identify additional waterside or landside access opportunities in the future to enhance the mobility network for the movement of people.

M Objective 1.2 Implement a series of interconnecting mobility hubs throughout Tidelands

M Policy 1.2.1 The District shall require the planning, designing, and implementation of a network of mobility hubs (Regional, Local Gateway, and Connector) that provide the opportunity for users to change from one mode of travel to another (refer to Chapter 5, Planning Districts, Coastal Access Mobility maps, for mobility hub locations and specifications and Chapter 4, Baywide Development Standards, for the associated criteria of the development for each type of mobility hub). This requirement shall apply to all subdistricts and commensurate with development intensity in accordance with WLU Goal 7 (Chapter 3.1, Water and Land Use Element) and M Policy 1.2.2.

M Policy 1.2.2 Permittees of development shall contribute to the creation of mobility hubs through funding or construction, as shown in Chapter 5, Planning Districts, coastal access mobility maps.

M Policy 1.2.3 Mobility hubs shall connect to water-based access points throughout the Bay, where feasible.

M Policy 1.2.4 The District shall encourage the development of mobility hubs rather than surface parking to provide proximate connections to the water and Tidelands, where feasible.

M Policy 1.2.5 The District shall coordinate with adjacent jurisdictions to add wayfinding signage that identifies coastal access opportunities on Tidelands, including public walkways, docks and piers, beaches, and other public areas and amenities.

M Policy 1.2.6 Development shall provide and maintain legible wayfinding signage located in easily viewable areas in accordance with Chapter 4, Baywide Development Standards, and Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

M Policy 1.2.7 The District shall require, in coordination with permittees of development, the planning, designing, and implementation of a comprehensive, nondigital wayfinding signage system to guide visitors to and throughout Tidelands.

M Policy 2.1.2 The District shall encourage the development of versatile infrastructure that can adapt to future needs and support multiple modes of travel for the transfer of freight between waterside and landside uses.

M Policy 2.1.5 The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside.

M Policy 2.1.6 The District shall collaborate with public and private entities to invest in terminal infrastructure that supports the optimization of cargo movement, cargo laydown areas, cargo handling equipment, and gate operations directly related to maritime cargo.

M Policy 2.1.7 The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, pipelines, and the electrical grid, to enable efficient movement of goods along those networks and to support the working waterfront.

M Policy 2.2.1 Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, *Planning Districts*, including any development standards within the applicable planning district or subdistrict.

M Policy 2.2.3 The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives.

M Policy 2.2.4 The District shall engage with railroad operators and agencies that have transportation authority to maintain, enhance, and expand access between the cargo terminals and the regional freight infrastructure.

M Policy 2.2.5 The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, and regional transportation agencies, shall maintain and develop improvements to

linkages between the marine terminals and landside networks, including but not limited to roadways, rail, and pipelines, to enable efficient movement of goods along those networks and to support the working waterfront.

M Policy 2.2.6 The District and permittees shall optimize off-terminal land-based freight networks to maintain, enhance, and expand the vitality of the working waterfront.

M Policy 2.2.7 In coordination with operators and stakeholders, the District shall plan for improvements to railroad corridors, such as spurs, rail storage facilities, switching facilities, and suitable rail trackage within the working waterfront, both on dock and near dock, to better interface the movement of cargo between ship and land carriers.

M Policy 2.2.9 The District shall coordinate with its tenants and the cities of National City or San Diego to enhance access and connectivity between the Tenth Avenue and National City marine terminals, on both the waterside and landside, to allow for the convenient transfer of goods. Specific improvements to enhance the connectivity between terminals are outlined in Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict.

M Policy 3.1.1 The District shall engage with the U.S. military, local, regional, and State agencies with transportation authority to:

- a. Identify and document the transportation facilities located on Tidelands that either are part of the STRAHNET⁷ or provide a critical connection to strategic facilities located on or adjacent to Tidelands;
- b. Ensure that the critical components of the District's transportation network are available and maintained to meet the goals and standards of the STRAHNET; and
- c. Ensure that the identified critical transportation facilities located on Tidelands are clear of permanent obstructions that would prohibit or slow the movement of military use when needed for Department of Defense activities.

M Policy 3.1.2 The District shall engage with the U.S. military, local, regional, and State agencies with transportation authority to coordinate the maintenance of facilities that connect to the region's STRACNET⁸ rail corridor.

M Policy 3.2.1 The District shall engage with the U.S. military to identify and ensure the effectiveness of critical assets for military use, such as marine terminals, rail facilities, and docks and piers, that may be needed in times of emergency while allowing day-to-day access to strategic assets.

M Policy 3.2.2 The District shall plan and maintain its transportation network so that it has the capacity to evacuate operations located on terminals in a manner and timeframe consistent with the U.S. military's needs.

SR Policy 1.1.3 The District shall coordinate with regional transportation agencies to design shared infrastructure that meets emergency needs, including evacuation, such as evacuation for post-seismic events and tsunamis.

⁷ STRAHNET = Strategic Highway Network

⁸ STRACNET = Strategic Rail Corridor Network

SR Policy 1.1.5 The District shall coordinate with adjacent jurisdictions and State agencies to identify and address safety improvements at rail crossings.

EJ Policy 1.1.1 The District shall coordinate with adjacent jurisdictions to:

- a. Identify multimodal improvements that would enhance connections between adjacent disadvantaged communities and Tidelands; and
- b. Prioritize the implementation of the identified multimodal improvements to enhance connections between adjacent disadvantaged communities and Tidelands.

EJ Policy 1.1.2 The District shall coordinate with regional agencies with transit authority, as well as adjacent jurisdictions, to explore and expand public transit points and provide a range of affordable transit options for people from adjacent disadvantaged communities to access Tidelands.

EJ Policy 1.1.3 Permittees of development, especially adjacent to disadvantaged communities, shall implement commuter programs and transportation demand management programs to encourage their current or future employees and guests to use alternative transit options.

WLU Policy 3.1.5 Protect and, where feasible, expand waterside amenities, such as water-based transfer points, overnight transient docking, free or lower cost short-term public docking, anchorages, launch areas for nonmotorized watercraft, and boat launch facilities.

ECON Policy 1.2.4 The District shall explore the creation of, and allow for the use of, different financing mechanisms to help fund the building of new infrastructure or improvement to existing infrastructure, including multimodal transportation facilities, water and stormwater systems, information and communication systems, and public space.

ECON Policy 1.2.5 The District shall explore the creation of parking districts to help fund and manage the changing parking needs in Tidelands.

ECON Policy 1.2.6 The District shall create an impact fee program to help fund needed public infrastructure and public amenities whereby permittees of development shall contribute its fair share to the cost of public infrastructure and access improvements.

4.14.4.4 Project Impacts and Mitigation Measures

Threshold 1: Conflict with an applicable program, plan, ordinance, or policy addressing the circulation system?

Impact Analysis

The plan consistency analysis describes existing regional and local plans and policies and fulfills State CEQA Guidelines Section 15125(d). The emphasis of the analysis is on potential conflicts between the proposed PMPU and existing applicable programs, plans, ordinances, or policies addressing the circulation system, and whether any conflicts would result in significant environmental effects in comparison to existing conditions, and which have not already been disclosed under the other significance thresholds in this Draft PEIR. The proposed PMPU is considered consistent with the provisions of the identified regional and local plans if it meets the general intent of the applicable plans. A given project need not be in perfect conformity with every policy nor does State law require precise conformity of a proposed project with every policy or land

use designation. Courts have also acknowledged that general and specific plans attempt to balance a range of competing interests, and that it is nearly, if not absolutely, impossible for a project to be in perfect conformity with each and every policy set forth in the applicable plan. Additionally, in reaching such consistency conclusions, the District may also consider the consequences of denial of a project, which can also result in other policy inconsistencies. The analysis below provides a brief overview of the most relevant planning documents and their primary goals. However, the District's conclusions regarding potential conflicts are based upon the planning documents as a whole.

Impacts on transit circulation would occur if the proposed PMPU would conflict with the adopted policies, plans, or programs that support public transit. Existing light rail transit stops that serve the proposed PMPU area, from north to south, include the Washington Street, Middletown, County Center/Little Italy, Santa Fe Depot, America Plaza, Seaport Village, Convention Center, Gaslamp Quarter, 12th and Imperial, Barrio Logan, and Harborside Stations. Additionally, the COASTER commuter train and Amtrak Pacific Surfliner provide regional and interregional access, respectively, to the proposed PMPU area. Lastly, several MTS bus routes serve the PMPU area, with several bus stops located in, or adjacent to, each of the planning districts.

OPR's December 2018 Technical Advisory on Evaluating Transportation Impacts under CEQA explains: "When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact" (OPR Technical Advisory, page 19). As also discussed in OPR's SB 743 amendment package transmittal letter "[l]egislative findings in Senate Bill 743 plainly state that CEQA can no longer treat vibrant communities, transit, and active transportation options as adverse environmental outcomes." Therefore, increased transit use is not considered an adverse environmental impact in this Draft PEIR.

Impacts related to pedestrian and bicycle circulation would occur if the proposed PMPU would conflict with the adopted programs, plans, ordinances, or policies that support these alternative modes of transportation. Impacts on the pedestrian and bicycle circulation system were considered through a review of the proposed water and land use scenarios and existing pedestrian and bicycle facilities within each planning district.

Impacts of Water and Land Uses

The impact analysis below considers the following programs, plans, ordinances, and policies related to the circulation system.

- Riding to 2050, the San Diego Regional Bike Plan, SANDAG
- Downtown Community Plan, City of San Diego
- Street Design Manual, City of San Diego
- Bicycle Master Plan, City of San Diego
- Pedestrian Master Plan, City of San Diego
- Bicycle Transportation Plan, City of Imperial Beach
- Active Transportation Plan, City of Coronado

An analysis of the proposed PMPU's potential to conflict with the policies of SANDAG's Regional Plan is provided in Table 4.9-1 in Section 4.9, *Land Use and Planning*. As demonstrated in Table 4.9-1, the proposed PMPU would not conflict with the policy objectives of the Regional Plan.

Construction

The water and land use designations proposed by the PMPU would allow for the development of future projects through the 2050 Horizon Year. The construction of future projects would conform to the subdistrict development standards laid out in Chapter 5 of the proposed PMPU. Chapter 3 of this Draft PEIR provides a complete list of allowable uses and potential development that could occur in all planning districts.

Construction of these future development projects may include the use of roadways for construction worker vehicle trips and to deliver materials, haul construction debris, or conduct utility infrastructure development. Roadways, bikeways, transit, and pedestrian facilities could be blocked, or users could experience delays during construction activities. However, these delays or facility closures typically would be temporary and infrequent, would provide detours or alternate access, and would not permanently prevent the use of roadways, transit, pedestrian, or bicycle facilities. In addition, as discussed in Section 4.7, *Hazards & Hazardous Materials*, construction projects would be required to have the appropriate permits issued by the local municipality with jurisdiction over the circulation network to ensure emergency access is maintained and proper detours and safety measures are in place (i.e., City of San Diego for PD1, PD2, PD3, and PD4; City of Imperial Beach for PD8; and City of Coronado for PD9 and PD10).

Future construction projects allowed under the proposed PMPU may be subject to the requirements of encroachment and/or right-of-way permits from local jurisdictions including the City of San Diego, City of Coronado, or City of Imperial Beach, as well as Caltrans (see Sections 4.14.3.2 and 4.14.3.3). In the City of San Diego, Municipal Code Section 129.0702 requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects, construction projects, and other work that encroaches into the public right-of-way including sidewalks, as well as an accompanying traffic control plan. Future development within PD1, PD2, PD3, and PD4 would be subject to this requirement. For future development in PD8, the City of Imperial Beach requires a Temporary Encroachment Permit for any work performed in any public right-of-way of the city (Municipal Code Section 12.04.020). Lastly, future development in PD9 and PD10 would be subject to City of Coronado Municipal Code Section 52.10, which requires a Right-of-Way Permit for all work on public property, such as repairs to sidewalks, curbs and gutters, driveway aprons, and parkways (the area between the sidewalk and the curb); or to place equipment in the public right-of-way, such as a crane placed in the street to transport materials to a second story. Section 52.10.060 includes specific requirements for traffic control around the work site. Therefore, construction would not conflict with, or prevent implementation of, the programs, plans, ordinances, or policies addressing the circulation system.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within the North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this Draft PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, due to compliance with local regulations that manage the circulation network, implementation of the proposed PMPU would result in a less-than-significant impact associated with conflict with applicable plans, programs, ordinances or policies addressing the circulation system.

Construction activities associated with the new Waterfront Destination Park in PD3 under Option 1 would be subject to the requirements of encroachment and/or right-of-way permits from the City of San Diego for work that would encroach on road right-of-way. City of San Diego Municipal Code Section 129.0702 requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects, construction projects, and other work that encroaches into the public right-of-way including sidewalks, as well as an accompanying traffic control plan. Potential closure or partial blockage of roadways, sidewalks, or bike paths would be temporary, alternative routes would be provided, and would not conflict with the flow of traffic. As such, as these closures and/or detours would only be temporary in nature, they would not affect the ability to implement or maintain the applicable circulation plans, programs, ordinances, or policies on a long-term basis. Therefore, construction under Option 1 would not conflict with the goals and policies of the Downtown Mobility Plan, the City of San Diego Bicycle Master Plan, and the City of San Diego Pedestrian Master Plan. Impacts would be less than significant and would not include any additional or more severe impacts related to conflict with applicable plans, programs, ordinances, or policies than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, due to compliance with local regulations that manage the circulation network, implementation of the proposed PMPU would result in a less-than-significant impact associated with conflict with applicable plans, programs, ordinances or policies addressing the circulation system.

Construction activities associated with Option 2 would be subject to the requirements of encroachment and/or right-of-way permits from the City of San Diego. City of San Diego Municipal Code Section 129.0702 requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects, construction projects, and other work that encroaches into the public right-of-way including sidewalks, as well as an accompanying traffic control plan. Potential closure or partial blockage of roadways, sidewalks, or bike paths would be temporary, alternative routes would be provided, and would not conflict with the flow of traffic. As such, as these closures and/or detours would only be temporary in nature, they would not affect the ability to implement or maintain the applicable circulation plans, programs, ordinances, or policies on a long-term basis. Therefore, construction associated with Option 2 would not conflict with the goals and policies of the Downtown Mobility Plan, the City of San Diego Bicycle Master Plan, and the City of San Diego Pedestrian Master Plan. Impacts would be less than significant and would not include any additional or more severe impacts related to conflict with applicable plans, programs, ordinances, or policies than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, due to compliance with local regulations that manage the circulation network, implementation of the proposed PMPU would result in a less-than-significant impact

associated with conflict with applicable plans, programs, ordinances, or policies addressing the circulation system.

Construction activities associated with the new park that could be developed under Option 3 would be subject to the requirements of encroachment and/or right-of-way permits from the City of San Diego. City of San Diego Municipal Code Section 129.0702 requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects, construction projects, and other work that encroaches into the public right-of-way including sidewalks, as well as an accompanying traffic control plan. Potential closure or partial blockage of roadways, sidewalks, or bike paths would be temporary, alternative routes would be provided, and would not conflict with the flow of traffic. As such, as these closures and/or detours would only be temporary in nature, they would not affect the ability to implement or maintain the applicable circulation plans, programs, ordinances, or policies on a long-term basis. Therefore, construction of Option 3 would not conflict with the goals and policies of the Downtown Mobility Plan, the City of San Diego Bicycle Master Plan, and the City of San Diego Pedestrian Master Plan. Impacts would be less than significant and would not include any additional or more severe impacts related to conflict with applicable plans, programs, ordinances, or policies than buildout of the proposed PMPU without Option 3.

Operation

Implementation of the proposed PMPU would result in the operation of future development consistent with the proposed water and land uses as described in Chapter 3, which provides a complete list of allowable uses and potential development that could occur in all planning districts. The following describes the potential operational impacts associated with implementation of the proposed PMPU within each planning district.

Planning District 1: Shelter Island

The following planned improvements identified in the proposed PMPU could result in changes to the transportation system in PD1:

- Development of a Connector Mobility Hub on the western portion of Shelter Island Drive in West Shelter Island Subdistrict.
- Development of a Local Gateway Mobility Hub at the Shelter Island Yacht Basin in West Shelter Island Subdistrict.
- Enhancement of the public realm along Shelter Island Drive (Entry Segment).
- Reconfiguration of Shelter Island Drive to enhance the pedestrian experience, develop bike lanes, and reconfigure parking.
- Development of enhanced pedestrian crossing facilities.
- Development of a Connector Mobility Hub south of North Harbor Drive in East Shelter Island Subdistrict.
- Modify North Harbor Drive and Nimitz Boulevard to accommodate vehicular traffic, pathways, and bikeways in East Shelter Island Subdistrict.
- Other planned improvements would include development, enhancement, or maintenance of existing and new multi-use paths, development of up to four water-based transfer points,

allowance of modifications to moorings to accommodate a cumulative increase of up to 10 moored vessels at existing Shelter Island Anchorages, and the development of up to 35 additional recreational boat slips and 65 additional commercial fishing slips in East Shelter Island Subdistrict.

A detailed description of anticipated development and improvements to transportation facilities is provided in Chapter 3. The reconfiguration of Shelter Island Drive would increase the multimodal transportation network and would promote non-automobile use. The multimodal improvements (including development or maintenance of pedestrian facilities, public trails, bike lanes, and water-based transit) would be consistent with the policies and goals of the local plans applicable to PD1, including but not limited to the City of San Diego Street Design Manual, the City of San Diego Bicycle Master Plan, the City of San Diego Pedestrian Master Plan, and the RTP (see Table 4.9-1 in Section 4.9), which all seek to enhance multimodal mobility options in the region. It should be noted that that only renovations of existing land uses and replacement in-kind could occur in PD1. The water uses include the potential addition of up to 35 recreational boat berthing slips, 30 new anchorage moorings, and 65 commercial fishing berthing slips. Therefore, implementation of the proposed transportation improvements in PD1 would not conflict with, or prevent implementation of, programs, plans, ordinances, or policies addressing the circulation system.

Planning District 2: Harbor Island

The following planned improvements identified in the proposed PMPU could result in changes to the transportation system in PD2.

West Harbor Island Subdistrict

- Develop a local Gateway Mobility Hub on the western portion of Harbor Island Drive.
- Narrow North Harbor Drive to four general travel lanes to accommodate vehicular traffic.
- Develop a multi-use path along the south side of North Harbor Drive.
- Implement a dedicated transit right-of-way along the south side of North Harbor Drive east of Harbor Island Drive that would support a bayfront circulator or other transit options.
- Modify the Entry Segment of Harbor Island Drive including new signage, an arrival gateway, and pedestrian connections.
- Modify the east-west portion of Harbor Island Drive (Island Segment) including narrowing Harbor Island Drive, reconfiguring off-street public parking, and pedestrian improvements.

East Harbor Island Subdistrict

- Develop a Regional Mobility Hub near the northwestern portion of the East Basin of Harbor Island.
- Develop an entry gateway on or adjacent to Harbor Island Drive (Entry Segment)
- Modify Liberator Way, which may include narrowing to two general travel lanes, on-street parking, crosswalks and other pedestrian improvements.

Future development allowed under the PMPU in PD2 would also include improvement of existing coastal access and marina facilities, which may also result in changes to the use and efficiency of the transportation system. The planned improvements to the water-based uses include additional

water-based transfer points, public docking slips, recreational boat berthing vessel slips, moorings, and a nonmotorized watercraft launching area. Planned improvements related to land-based uses in PD2 include the development of additional retail, restaurant, or a combination of both; development of additional hotel rooms; and development of lower cost hotel accommodations, possibly as part of the Regional Mobility Hub. These land- and water-based improvements would be consistent with existing uses allowed in PD2 under the existing Port Master Plan (PMP), and would allow for the expansion of these uses in certain designated areas as specified in the proposed PMPU. These improvements would not conflict with the applicable policies and plans, including SANDAG's RTP (see Table 4.9-1 in Section 4.9), and the City of San Diego's Downtown Mobility Plan and Bicycle Master Plan, because the proposed improvements would not prevent implementation of transportation-related plans and programs in PD2.

The future development of mobility hubs, multi-use paths and other pedestrian improvements, and transit right-of-way improvements would provide additional multimodal transportation options and would promote alternatives to automobile usage, which could result in a decrease in automobile trips and reduce the overall VMT in PD2. These proposed multimodal improvements would be consistent with the goals of the City of San Diego's Downtown Mobility Plan and Bicycle Master Plan, which seek to enhance pedestrian and bicycle movement and connect gaps in San Diego's bicycle network. New or improved roadways would be designed and constructed in compliance with the *City of San Diego Street Design Manual*. Therefore, proposed improvements in PD2 would not conflict with, or prevent implementation of, programs, plans, ordinances, or policies addressing the circulation system.

Planning District 3: Embarcadero

The following planned improvements identified in the proposed PMPU could result in changes to the transportation system in PD3:

North Embarcadero Subdistrict

- Develop a Regional Mobility Hub on the block bounded by Grape Street, North Harbor Drive, Hawthorn Street, and Pacific Highway.
- Develop a Local Gateway Mobility Hub between Ash and B Streets.
- Extend A Street to North Harbor Drive to provide a link between North Harbor Drive and Pacific Highway, for pedestrian, bicycle and vehicle use.
- Reconnect B Street between Pacific Highway and North Harbor Drive for pedestrian, bicycle and vehicle use, in addition to temporary truck and other staging associated with cruise ship operations.
- Reconfigure North Harbor Drive to more efficiently accommodate all modes of travel.

Central Embarcadero Subdistrict

- Reconfigure the North Harbor Drive/West Harbor Drive right-of-way to accommodate all modes of travel.
- Improve the efficiency and safety of the intersection at G Street and North Harbor Drive.

South Embarcadero Subdistrict

- Modify, or replace-in-kind, the existing Local Gateway Mobility Hub near the Convention Center.

- Support Market Street closure between West Harbor Drive and Columbia Street, and provide a pedestrian scramble or roundabout at the West Harbor Drive/Market Street intersection, if determined feasible following coordination with adjacent jurisdiction.
- Reconfigure West Harbor Drive/East Harbor Drive between the Harbor Drive/Market Street intersection and Park Boulevard to more efficiently accommodate all modes of travel.

The potential improvements to pedestrian, bicycle, and roadway facilities are consistent with the goals and policies of the Downtown Mobility Plan, the City of San Diego Bicycle Master Plan, and the City of San Diego Pedestrian Master Plan, which seek to remove barriers to walking and biking routes and to promote connectivity of these transit options through the Downtown area, where PD3 is located. Implementation of dedicated transit right-of-way between SDIA and Santa Fe Depot would be consistent with the intent of the Airport Connectivity Subcommittee, which was assembled to improve transit opportunities to and from SDIA. Therefore, the proposed transportation system improvements would not conflict with, or prevent implementation of, programs, plans, policies, or ordinances related to the circulation system in PD3.

Potential future improvements to coastal access could include improvements and expansion of existing uses in PD3, including development of water-based transfer points, public docking, a new transient dock with up to 20 vessel slips, a new public pier, a new marina, and an increase in vessel moorings and boat berthings. The future development of visitor-serving commercial uses in PD3 could include additional hotel rooms, retail and restaurant space, and museum space, and expanding the exhibit area, meeting rooms, ballrooms, and support space for the convention center. This future development would be new improvements or expansions of existing compatible uses within the planning district that would be consistent with both the existing surrounding land uses and the proposed land use designations of the PMPU. Sections 5.3.2(C), 5.3.3(C) and 5.3.4(C) of the proposed PMPU describe the type, size, and extent of the planned improvements for North Embarcadero Subdistrict, Central Embarcadero Subdistrict, and South Embarcadero Subdistrict, respectively. In addition, Sections 5.3.2 (D), 5.3.3(D), and 5.3.4(D) describe the development standards for the planned improvements and future development in each subdistrict, including requirements, size, location, siting, and orientation. Implementation of the planned improvements and the development standards ensures structures and waterside improvements would be constructed to be compatible with the existing setting and the vision of PD3. Because the planned improvements would not propose new incompatible uses or changes to the transportation infrastructure system, they would not conflict with, or prevent implementation of, programs, plans, policies, or ordinances related to the circulation system in PD3.

Planning District 4: Working Waterfront

The following planned improvements identified in the proposed PMPU could result in changes to the transportation system in PD4:

Tenth Avenue Marine Terminal Subdistrict

- Modify the entire segment of northbound and southbound Harbor Drive within the District's jurisdiction by providing a multi-use pathway; and including a "flexible" lane in each direction that is dedicated for trucks, transit buses, and/or shuttles with an information technology system that can be modified or adjusted during peak and nonpeak hours.

- Coordinate with transportation agencies and adjacent jurisdictions to reconfigure portions of Harbor Drive outside of the District's jurisdiction to improve efficiency and safety for vehicular traffic, good movement, and pedestrian and bicycle facilities.

Cesar Chavez Park Subdistrict

- Modify Cesar Chavez Parkway to accommodate vehicular traffic while allowing for pedestrian, bicycle, and mobility enhancements.
- Modify or replace in-kind pathways to Cesar Chavez Park and the Cesar Chavez Pedestrian Pier and expand public access by providing a connection to the Bayshore Bikeway.

Harbor Drive Industrial Subdistrict

- Modify the entire segment of northbound and southbound Harbor Drive within the District's jurisdiction; the same as identified for the Tenth Avenue Marine Terminal Subdistrict.

The planned improvements to Harbor Drive and Cesar Chavez Parkway identified in the proposed PMPU would increase efficiency of the roadways, and would provide multimodal transit opportunities that could result in a decrease in automobile trips and reduce the overall VMT in PD4.

Planned improvements for water-based and land-based uses would include modifications of pedestrian pathways and the Cesar Chavez Pedestrian Pier, and development of a water-based transfer point. The planned improvements do not propose coastal or landside access improvements that would conflict with applicable programs, plans, policies, or ordinances related to the circulation system in PD4.

It should be noted, future increase in overall cargo throughput at TAMT, located in PD4, was evaluated and approved in the certified TAMT EIR. As noted in Section 4.10 of the TAMT EIR, the following assumptions were made for goods movement at the terminal.

- The percent of total cargo shipped via rail and barge from the TAMT will remain the same under buildout (i.e., 2035) as it is today.
- The ratio of metric tons to cargo that is carried by each truck will remain the same under buildout conditions (i.e., 2035).
- The destinations of the trucks will not change or vary significantly under buildout conditions (i.e., 2035).

Implementation of the proposed PMPU would not introduce any new water or land uses to PD4; however, it would allow aquaculture as a secondary use, which would not conflict with transportation and mobility plans. Therefore, the operations in PD4 would not conflict with, or prevent implementation of, programs, plans, policies, or ordinances related to the circulation system in PD4.

Planning District 7: South Bay

A portion of PD7, Pond 20, is excluded from this analysis for the proposed PMPU because it is covered under a separate EIR, the Wetland Mitigation Bank at Pond 20 and Port Master Plan Amendment Project EIR, which was certified by the District Board in April 2021. The remaining portions of PD7 would not include any transportation improvements or water or land uses that would result in a change in operations. Therefore, implementation of the proposed PMPU in PD7

would not conflict with, or prevent implementation of, programs, plans, policies, or ordinances related to the circulation system in PD7.

Planning District 8: Imperial Beach Oceanfront

Planned improvements to the transportation system identified in the proposed PMPU for PD8 would include:

- Develop a Connector Mobility Hub in the vicinity of Seacoast Drive and Elkwood Avenue.
- Modify public access to the shoreline, oceanfront, and Imperial Beach Pier to include wayfinding signage and pedestrian lighting.
- Develop bicycle parking at the Imperial Beach Pier Plaza.

In addition, planned improvements to water-based and land-based uses would include modifications to potentially expanding the pier, and adding 18,000 square feet of retail and/or retail with restaurant space at the existing pier buildings and on the Palm Avenue and Elkwood Avenue sites. The proposed water and land use changes and allowable primary and secondary uses would not conflict with the goals and policies of the City of Imperial Beach Bicycle Transportation Plan, which proposes bike facilities to benefit local and regional bicycle travel and to integrate with the existing bikeway system. Planned improvements would complement these goals by proposing the development of a connector mobility hub and bicycle parking at the Imperial Beach Pier Plaza. All future development and transportation improvements would be required to be consistent with the Imperial Beach Bicycle Transportation Plan. Therefore, implementation of the proposed PMPU in PD8 would not conflict with, or prevent implementation of, programs, plans, policies, or ordinances related to the circulation system in PD8.

Planning District 9: Silver Strand

Approximately 2.83 acres of Commercial Recreation land will be changed to Recreation Open Space after an existing leasehold expires in 2034. Additionally, a Connector Mobility Hub, or larger hub, is identified in the proposed PMPU in the Crown Isle Subdistrict in PD9. Potential future development of recreational marina facilities could include developing up to 10 additional recreational boat berthing vessel slips and associated recreational marina-related facilities in the Crown Isle Subdistrict. Neither the proposed multimodal mobility hub nor the water-based and land-based planned improvements would conflict with the City of Coronado Active Transportation Plan. Therefore, there are no changes that would conflict with, or prevent implementation of, programs, plans, policies, or ordinances related to the circulation system in PD9.

Planning District 10: Coronado Bayfront

The planned improvements identified in the proposed PMPU for PD10 would include the following improvements to the transportation system:

North Coronado Subdistrict

- Develop a Local Gateway Mobility Hub or larger hub, near the Ferry Landing.
- Maintain continuous public coastal access to the Coronado Bayfront via the Bayshore Bikeway.

Future development in PD10 could also include water-based improvements such as maintaining existing and developing new water-based transfer points, modifications to allow for an increase in

moorings, development of an additional short-term public docking slip, and development of up to 55 additional recreational boat berthing vessel slips. There are no transportation system improvements identified in the South Coronado Subdistrict. Neither the transportation-related improvements nor the water-based improvements would conflict with or prevent implementation of applicable policies of the City of Coronado Active Transportation Plan. Therefore, there are no changes that would conflict with, or prevent implementation of, programs, plans, policies, or ordinances related to the circulation system in PD10.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, one of three options within North Embarcadero could be selected by the Board if the proposed PMPU is approved. Each of these options would replace the water and land uses proposed within the same area of the proposed PMPU located along North Harbor Drive. Figures 3-5, 3-6, and 3-7 illustrate the locations. Operation-related impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU would be consistent with the goals and policies of the programs, plans, policies, or ordinances related to the circulation system applicable to the proposed PMPU area, which seek to increase the accessibility and connectivity of multimodal infrastructure throughout the Tidelands. Impacts would be less than significant.

The proposed closure of North Harbor Drive between West G Street and Broadway to vehicular traffic would still allow for pedestrian, bicycle, and transit access and would not conflict with City of San Diego Bicycle Master Plan or the City of San Diego Pedestrian Master Plan. The potential improvements to pedestrian, bicycle, and roadway facilities are consistent with the goals and policies of the Downtown Mobility Plan, the City of San Diego Bicycle Master Plan, and the City of San Diego Pedestrian Master Plan, which seek to remove barriers to walking and biking routes and to promote connectivity of these transit options through the Downtown area, where PD3 is located. Therefore, the proposed transportation system improvements under Option 1 would not conflict with, or prevent implementation of, programs, plans, policies, or ordinances related to the circulation system in PD3. Option 1 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to conflict with applicable programs, plans, policies, or ordinances related to the circulation system than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU would be consistent with the goals and policies of the programs, plans, policies, or ordinances related to the circulation system applicable to the proposed PMPU area, which seek to increase the accessibility and connectivity of multimodal infrastructure throughout the Tidelands. Impacts would be less than significant.

The operational changes to roadway facilities due to the 205-foot setback along North Harbor Drive would be consistent with the goals and policies of the Downtown Mobility Plan, the City of San Diego Bicycle Master Plan, and the City of San Diego Pedestrian Master Plan, which seek to remove barriers to walking and biking routes and to promote connectivity of these transit options through the Downtown area, where PD3 is located. Therefore, the proposed improvements under Option 2 would not conflict with, or prevent implementation of, programs,

plans, policies, or ordinances related to the circulation system in PD3. Impacts under Option 2 would be less than significant and would not result in any additional or more severe impacts related to conflict with plans, programs, ordinances, or policies than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would be consistent with the goals and policies of the programs, plans, policies, or ordinances related to the circulation system applicable to the proposed PMPU area, which seek to increase the accessibility and connectivity of multimodal infrastructure throughout the Tidelands. Impacts would be less than significant.

The potential realignment of North Harbor Drive and the establishment of a 205-foot setback would be consistent with the goals and policies of the Downtown Mobility Plan, the City of San Diego Bicycle Master Plan, and the City of San Diego Pedestrian Master Plan, which seek to remove barriers to walking and biking routes and to promote connectivity of these transit options through the Downtown area, where PD3 is located. The proposed realignment of North Harbor Drive between Hawthorne Street and B Street would continue to allow for pedestrian, bicycle, and transit access and would not conflict with the City of San Diego Bicycle Master Plan or the City of San Diego Pedestrian Master Plan. Therefore, operation of Option 3 would not conflict with, or prevent implementation of, programs, plans, policies, or ordinances related to the circulation system in PD3. Impacts under Option 3 would be less than significant and would not result in any additional or more severe impacts related to conflict with applicable plans, programs, ordinances, or policies associated with the circulation system than buildout of the proposed PMPU without Option 3.

Operations Conclusion

Implementation of the proposed PMPU may result in physical improvements to the transportation infrastructure in PD1, PD2, PD3, PD4, PD8, PD9, and PD10, as noted above. These changes would be consistent with the goals and policies of the programs, plans, policies, or ordinances related to the circulation system applicable to the proposed PMPU area, which seek to increase the accessibility and connectivity of multimodal infrastructure throughout the Tidelands. Similarly, the proposed water and land use changes would also be consistent with the goals of the programs, plans, policies, or ordinances related to the circulation system applicable to the proposed PMPU area. Therefore, the proposed PMPU would not conflict with, or prevent implementation of, applicable programs, plans, policies, or ordinances related to the circulation system in the proposed PMPU area.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies listed in Section 4.14.4.3 would not result in impacts related to a conflict with a program, plan, ordinance, or policy addressing the circulation system. Rather, the proposed PMPU policies listed in Section 4.14.4.3 would reduce and minimize potential impacts related to conflicts with existing circulation programs by ensuring coordination between agencies with transportation authority and with adjacent jurisdictions and permittees to plan shared mobility infrastructure in support of the safe movement of people and/or goods (M Policy 1.1.8); ensuring coordination with agencies to explore opportunities to expand accessible transit service to Tidelands (M Policy 1.1.9); requiring the District to develop TDM guidelines to reduce VMT and dependence on single-occupancy vehicles and requiring development to comply

with such guidelines (M Policy 1.1.11); ensuring coordination to enhance coastal connectivity and access throughout the Tidelands (M Policy 1.1.14); and requiring engagement with the U.S. Military, local, regional, and State agencies to ensure that critical transportation facilities are accessible for Department of Defense activities (M Policy 3.1.1).

Impact Determination and Mitigation

Implementation of the proposed PMPU would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Impacts would be less than significant.

Threshold 2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Impact Analysis

State CEQA Guidelines Section 15064.3 recommends use of automobile VMT as the preferred CEQA transportation impact metric for land use projects. In the Technical Advisory, OPR has recommended a significance threshold for VMT reduction to meet the State's long-term climate goals. OPR recommended the threshold for per capita or per employee VMT to be set at 15 percent below that of the existing development, also referred to as the *base year average*. A 15 percent reduction in VMT is consistent with the intent of SB 743. As discussed under OPR's Technical Advisory, "[a] project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa." (OPR 2018:6.)

Accordingly, a significant impact for office/employment uses would occur if the proposed PMPU would result in less than a 15 percent reduction in VMT compared to the base year average per employee. The Technical Advisory provides recommended thresholds for the development types, outlined below, that would be reasonably foreseeable under the proposed PMPU.⁹

Office

A project that would not reduce office-related VMT by 15 percent below existing regional VMT per employee would indicate a significant transportation impact.

Retail

A net increase in total VMT from a proposed retail development may indicate a significant transportation impact. Because new retail development typically redistributes shopping trips rather than creating new trips, estimating the total change in VMT (i.e., the difference in Total VMT in the area affected with and without a project) is the best way to analyze a retail project's transportation impacts.

⁹ Residential land uses are prohibited on District Tidelands by the Port Act and therefore are not proposed by the PMPU.

Other Land Uses

Lead agencies, using more location-specific information, may develop their own thresholds, which may include other land use types. In developing thresholds for other project types, or thresholds different from those recommended here, lead agencies should consider the purpose described in PRC Section 21099 and regulations in the State CEQA Guidelines on the development of thresholds of significance (e.g., Section 15064.7).

Non-Commercial Employees

Non-commercial employees would include all those within the Tidelands who do not work within commercial offices or retail, which are both covered by the Technical Advisory. Most of the employment groups within the District have very similar travel patterns and trip generation rates. Therefore, the average VMT/Employee rate for these uses was compared to the average non-commercial VMT/Employee rate at the regional level. If the proposed PMPU's average VMT/Employee rate is not 15 percent below the existing regional VMT/Employee rate, it would indicate a significant transportation-related impact.

Table 4.14-4 provides a summary of the proposed PMPU proposed planned improvements, the evaluation criteria, and the impact threshold.

Table 4.14-4. Evaluation Criteria and Impact Thresholds by Proposed Planned Improvements

Development	Evaluation Criteria	Recommended Impact Threshold
Landside		
Hotel	VMT/Employee	15% below regional average
Retail (square feet)	VMT with vs. without proposed retail change	No increase in total planning district VMT
Restaurant (square feet)	VMT with vs. without proposed retail change	No increase in total planning district VMT
Retail and Restaurant – Standalone (square feet)	VMT with vs. without proposed retail change	No increase in total planning district VMT
Convention (square feet)	VMT/Employee	No increase in regional VMT
Institutional	Exempt	N/A
Commercial Fishing	VMT/Employee	15% below regional average
Conservation Open Space	Exempt	N/A
Waterside		
Recreational Boat Berthing	VMT with vs. without proposed slips change	No increase in total Planning District VMT

Source: Appendix D

¹ Retail is included in the OPR Technical Advisory, restaurants are not.

Transportation Projects

State CEQA Guidelines Section 15064.3 indicates that a VMT analysis should be conducted for transportation projects, including roadway capacity projects. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. The Technical Advisory also refers to the potential

for induced travel and its associated effects. Induced travel occurs when improvements to a roadway facility enhance traffic operations and/or relieve congestion to the point at which travelers have a higher incentive to make a vehicular trip in lieu of a different mode of travel, or not taking the trip at all. Appendix 2 of the Technical Advisory identifies the following five factors that contribute to overall induced travel:

- **Changes in Trip Length:** Increasing roadway capacity could result in the ability to travel a longer distance in a shorter period of time, thereby making farther away destinations more attractive and resulting in longer trip lengths and more VMT.
- **Changes in Mode Choice:** People may shift to automobile use from other travel modes due to reduced automobile travel time stemming from a roadway capacity project, resulting in more automobile trips and increased VMT.
- **Route Changes:** Changing routing may lead to faster travel time that may attract more drivers to a new route, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.
- **Newly Generated Trips:** Faster travel speeds that may result from added roadway capacity could induce additional vehicle trips, resulting in increased VMT.
- **Land Use Changes:** Faster travel times from added roadway capacity could lead to land development farther out on the corridor, leading to a long-term incremental increase in trip lengths, resulting in increased VMT.

These five factors are utilized to evaluate and determine if the individual transportation infrastructure projects included within the proposed PMPU are anticipated to induce travel and ultimately increase VMT. If a transportation project is found to potentially conflict with one of these factors and increase VMT, it is considered to have a significant impact. It should be noted that the Technical Advisory identifies approximately 27 types of transportation projects that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis (OPR 2018:20).

OPR's Technical Advisory explains "[w]hen evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact" (OPR 2018:19). As also discussed in OPR's SB 743 amendment package transmittal letter "[l]egislative findings in Senate Bill 743 plainly state that CEQA can no longer treat vibrant communities, transit, and active transportation options as adverse environmental outcomes." Therefore, increased transit use is not considered an environmental impact in this Draft PEIR. Existing light rail transit stops that serve the proposed PMPU area, from north to south, include the Washington Street, Middletown, County Center/ Little Italy, Santa Fe Depot, America Plaza, Seaport Village, Convention Center, Gaslamp Quarter, 12th and Imperial, Barrio Logan, Harborside, E Street, and H Street Stations. Additionally, the COASTER commuter train and Amtrak Pacific Surfliner provide regional and interregional access, respectively, to the proposed PMPU area. Lastly, several MTS bus routes serve the PMPU area, with several bus stops located in, or adjacent to, each of the planning districts.

Impacts of Water and Land Uses

Construction

SB 743 was established to help California reduce GHG emissions associated with the transportation sector by 2030 and 2050. The goals of SB 743 in establishing VMT as the new criteria for determining transportation impacts include reducing GHG emissions and traffic-related air pollution, promoting the development of multimodal transportation systems, and providing clean, efficient access to destinations. The legislative intent of SB 743 focuses on VMT reductions through smart growth and planning, and the OPR Technical Advisory includes thresholds for residential, office, retail, and mixed-use land use projects, as well as transportation projects. Thus, the temporary generation of construction traffic was not an intended focus of SB 743 for the purposes of analyzing VMT under CEQA. The possible construction of future developments associated with the proposed PMPU is analyzed qualitatively and future construction would result in construction-related jobs. These jobs would be temporary and intermittent throughout the Horizon Year of the proposed PMPU (i.e., 2050). The VMT generated from construction traffic, including trips related to employees and truck deliveries, is not expected to substantially increase VMT in the region because such trips already exist and would continue to exist with implementation of a certified PMPU.

In 2020, the San Diego County labor market represented a labor force of 1,593,900 with an 8.0% unemployment rate (EDD 2021), and construction and extraction jobs represented 4.3% of the total labor market for San Diego-Carlsbad, California Metropolitan Statistical Area (U.S. Bureau of Labor Statistics 2020). Given the size and geographic extent of the San Diego labor market, it is reasonable to conclude that construction workers would be drawn from the local labor market and would not require importation of outside skilled laborers. Thus, the VMT associated with construction would not be newly generated, but rather redistributed from other areas of the region as workers transition from one construction job to another. As such, construction-related VMT is redistribution of VMT that would otherwise be generated by other temporary construction sites throughout the region.

A future proponent for a site-specific development that is consistent with the proposed PMPU, would be required to obtain a temporary encroachment and/or right-of-way permit from the appropriate jurisdiction(s) prior to commencing construction (see Section 4.14.3.3 for applicable local regulations). In the City of San Diego, Municipal Code Section 129.0702 requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects, construction projects, and other work that encroaches into the public right-of-way, including sidewalks, as well as an accompanying traffic control plan. Future development within PD1, PD2, PD3, and PD4 would be subject to this requirement. For future development in PD8, the City of Imperial Beach requires a Temporary Encroachment Permit for any work performed in any public right-of-way of the city (Municipal Code Section 12.04.020). Lastly, future development in PD9 and PD10 would be subject to City of Coronado Municipal Code Section 52.10, which requires a Right-of-Way Permit for all work on public property, such as repairs to sidewalks, curbs and gutters, driveway aprons, and parkways (the area between the sidewalk and the curb); or to place equipment in the public right-of-way, such as a crane placed in the street to transport materials to a second story. Municipal Code Section 52.10.060 includes specific requirements for traffic control around the work site (see Section 4.14.3.3 above for more details). In some cases, the approval of these permits requires the preparation and implementation of a traffic control plan for the management of traffic during the period in which the construction activities encroach into the right-of-way. This would also include sidewalks or bike routes if any of these facilities are affected by the encroachment. Traffic control

measures could include the use of flaggers or barriers to direct the flow of vehicular and non-motorized travel along blocked lanes, or signs to direct traffic to established detours along adjacent roadways in the area. The use of traffic control measures may alter the routes vehicles travel but would not substantially affect the total trips or miles vehicles take, as it would not induce more travel or change the length of existing routes substantially. Nor would the use of traffic control measures as a result of an encroachment permit prevent the use of non-motorized transit options as they would be considered in the measures that are implemented. Compliance with these existing regulatory requirements would ensure that construction of future PMPU-related development would not result in an impact on transit or non-motorized travel pursuant to State CEQA Guidelines Section 15064.3. Therefore, construction-related VMT impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, one of three options within the North Embarcadero Subdistrict could be selected by the Board, if the proposed PMPU is approved. Each of these options shows alternative project components from that of the proposed PMPU, as illustrated in Figures 3-5, 3-6, and 3-7. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU would not result in an increase in VMT due to construction, and impacts would be less than significant.

Construction activities associated with the new Waterfront Destination Park would involve vehicle trips related to construction workers and material delivery trips. However, similar to other construction under the proposed PMPU, these trips would be redistributed existing construction-related trips in the region; thus, they would not be anticipated to result in increased VMT. Additionally, construction activities that would encroach on public right-of-way would be required to comply with applicable local ordinances and policies regulating traffic control during construction. This would ensure encroachment into the public right-of-way would not interrupt traffic flow and result in an increase in VMT. Thus, construction under Option 1 would not result in any additional impacts related to increased VMT than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU would not result in an increase in VMT due to construction, and impacts would be less than significant.

Construction activities associated with Option 2 would involve vehicle trips related to construction workers and material delivery trips. However, similar to other construction under the proposed PMPU, these trips would be redistributed existing construction-related trips in the region; thus, they would not be anticipated to result in increased VMT. Additionally, construction activities that would encroach on public right-of-way would be required to comply with applicable local ordinances and policies regulating traffic control during construction. This would ensure encroachment into the public right-of-way would not interrupt traffic flow and result in an increase in VMT. Thus, construction under Option 1 would not result in any additional impacts related to increased VMT than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would not result in an increase in VMT due to construction, and impacts would be less than significant.

Construction activities associated with the new park space that could be developed under Option 3 would involve vehicle trips related to construction workers and material delivery trips. However, similar to other construction under the proposed PMPU, these trips would be redistributed existing construction-related trips in the region; thus, they would not be anticipated to result in increased VMT. Additionally, construction activities that would encroach on public right-of-way would be required to comply with applicable local ordinances and policies regulating traffic control during construction. This would ensure encroachment into the public right-of-way would not interrupt traffic flow and result in an increase in VMT. Thus, construction under Option 1 would not result in any additional impacts related to increased VMT than buildout of the proposed PMPU without Option 3.

Operation

Implementation of the proposed PMPU would result in the operation of future development within each planning district, which would affect future VMT within the proposed PMPU area. The summary provided below is taken from Appendix D.

In the analysis below, the proposed PMPU's VMT is compared to the Base Year Regional Average and the 2050 Regional Average. As noted above, "[a] project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa" (OPR 2018:6). Nevertheless, the analysis also conservatively provides a comparison to the future 2050 Regional Average. As shown, the 2050 Regional Average is lower because it includes planned and reasonably foreseeable future VMT-reducing improvements and programs and is therefore a more conservative impact threshold than the Base Year Regional Average.

Planning District 1: Shelter Island

There are no TPAs currently located within PD1. Therefore, VMT-related impacts that may potentially be associated with the assumed future development allowed by the proposed PMPU within PD1 must be analyzed to identify if they may be associated with a potential transportation-related impact.

Table 4.14-5 summarizes the existing development and anticipated future growth under the proposed PMPU within PD1.

Table 4.14-5. Planning District 1 (Shelter Island) Projected Future Development

Water and Land Use	Existing Quantity	Planned Growth Under PMPU	Total Quantity
Hotel (rooms)	1,119 rooms	0 rooms	1,119 rooms
Retail (square feet)	4.0 ksf	0.0 ksf	4.0 ksf
Restaurant (square feet)	56.9 ksf	0.0 ksf	56.9 ksf

Water and Land Use	Existing Quantity	Planned Growth Under PMPU	Total Quantity
Retail and Restaurant – Standalone (square feet)	51.3 ksf	0.0 ksf	51.3 ksf
Commercial Fishing	6.6 acres	4.5 acres	11.1 acres
Recreational Boat Berthing	2,430 slips	35 slips	2,465 slips

ksf = thousand square feet

Employment, Retail, Restaurant, and Recreational VMT-Related Impacts

As shown in Table 4.14-5, the PMPU does not propose any additional landside development in PD1, but would allow for the development of up to 35 additional recreational boat slips. It should be noted that this increase would only account for approximately 1.5 percent of the total supply of recreational boat slips within the planning district and would not appreciably change the overall acreage of the Recreational Berthing water use. While the addition of recreational boat berthing slips would not affect employment-based VMT, it would still generate additional vehicle trips and associated VMT from marina users. Because the threshold for recreational boat berthing uses is no net increase in VMT, any additional VMT generated would be considered a significant impact. Therefore, there is the potential that the additional boat slips could result in a net increase in VMT within PD1. This would be a significant impact without mitigation (**Impact-TRA-1**).

Transportation Projects VMT-Related Impacts

State CEQA Guidelines Section 15064.3(b)(2) provides that transportation projects that reduce or have no impact on VMT should be presumed to have a less-than-significant impact. As described in Chapter 3, the proposed PMPU includes transportation infrastructure improvements to provide facilities for alternative travel modes (i.e., pedestrian and bicycle) to help balance all transportation modes within PD1. These improvements would include development of mobility hubs, enhancing pedestrian crossing facilities, developing bike lanes, and reconfiguring parking (specific improvements within PD1 related to the transportation system are listed in further detail in the Impact Analysis for Threshold 1).

Because these improvements would provide additional multimodal transportation options and would promote alternatives to automobile use, they are expected to result in fewer automobile trips and reduce overall VMT within PD1. Therefore, the transportation improvements in PD1 would not induce travel, and the impacts on the transportation system would be less than significant.

Accessibility Improvements

Planned improvements that would enhance existing accessibility features or develop new multimodal transit features in PD1 would include the development of a Local Gateway Mobility Hub in the West Shelter Island Subdistrict, the development of a Connector Mobility Hub in the East Shelter Island Subdistrict, and the development and operation of a bayfront circulator that would provide access points from PD1 to PD2 and PD3. These planned improvements would encourage non-automobile use and would reduce VMT. Therefore, impacts would be less than significant.

Planning District 2: Harbor Island

There are no TPAs currently located within PD2. Therefore, VMT-related impacts that may potentially be associated with the assumed future development allowed by the proposed PMPU,

within the planning district must be analyzed to identify if they may be associated with a potential transportation-related impact.

Table 4.14-6 summarizes the existing development and anticipated future growth under the proposed PMPU within PD2.

Table 4.14-6. Planning District 2 (Harbor Island) Projected Future Development

Land Use	Existing Quantity	Planned Growth Under PMPU	Total Quantity
Hotel (rooms)	1,285 rooms	3,060 rooms	4,345 rooms
Retail (square feet)	2.1 ksf	62.3 ksf	64.4 ksf
Restaurant (square feet)	57.2 ksf	62.3 ksf	119.5 ksf
Retail and Restaurant – Standalone (square feet)	46.6 ksf	25 ksf	71.6 ksf
Recreational Boat Berthing	2,228 slips	225 slips	2,453 slips

ksf = thousand square feet

Employment VMT

As shown in Table 4.14-6, implementation of the proposed PMPU would result in development in PD2. Based on the evaluation criteria outlined in Table 4.14-4, the hotel land uses in PD2 would use VMT/Employee as an evaluation criterion for VMT impacts. To calculate the average VMT/Employee generated by PD2, the proposed PMPU-related development assumptions were incorporated into the SANDAG Series 13 Year 2050 Regional Model. Table 4.14-7 presents the results of VMT/Employee generated by the growth in PD2 associated with the proposed PMPU.

Table 4.14-7. Planning District 2 (Harbor Island) VMT Efficiency Metrics for Impact Analysis of Employment Uses

Land Use	Metric	Commercial Uses VMT/Employee
Hotel	Base Year Regional Average	25.9
	Threshold ¹	22.0
	PMPU	20.3
	PMPU vs. Significance Threshold	1.7 miles under threshold (21.6% below San Diego Regional Average)
	2050 Regional Average	21.2
	Significance Threshold ¹	18.0
	PMPU	20.3
	PMPU vs. Significance Threshold	2.3 miles over threshold (4.2% below 2050 Regional Average)
	Significant Impact?	Yes

Source: SANDAG Regional Transportation Model, July 2019

¹15% below San Diego Regional Average (see Section 4.14.4.1, *Methodology*)

As shown in Table 4.14-7, the proposed PMPU's employment uses would be more than 15 percent below Base Year Regional Average VMT; however, employment uses do not achieve a VMT reduction

of 15 percent below 2050 Regional Average. Therefore, the increase in employment-related VMT within PD2 would be significant (**Impact-TRA-2**).

Retail, Restaurant, and Recreational VMT

Based on the evaluation criteria outlined in Table 4.14-4 and the development summarized in Table 4.14-6, the evaluation criteria for VMT impacts associated with the proposed water and land use changes in PD2 are the net changes in total VMT without and with reasonably foreseeable retail, restaurant, and recreational boat berthing development. Impacts are considered significant if future development of retail, restaurant, and recreational uses under the proposed PMPU would result in an increase in the total VMT for the planning district. Table 4.14-8 presents the 2050 Total Planning District VMT with and without the proposed PMPU.

Table 4.14-8. Planning District 2 (Harbor Island) Total VMT for Impact Analysis of Retail, Restaurant, and Recreational Uses

Land Use	2050 Total VMT			Significant Impact?
	PMPU Buildout with No New Retail and Recreational Uses	PMPU Buildout	Net Growth	
Retail				
Restaurant	404,347	429,844	+25,497 (+6%)	Yes
Recreational Boat Berthing				

As shown, the Total VMT in PD2 is expected to increase by 25,497 miles with implementation of the proposed PMPU, which would exceed the applicable significance threshold for retail, restaurant, and recreational boat berthing uses of no net growth by approximately 6 percent. Therefore, potential impacts related to VMT for these uses in PD2 would be significant (**Impact-TRA-1**).

Transportation Projects VMT

State CEQA Guidelines Section 15064.3(b)(2) provides that transportation projects that reduce or have no impact on VMT should be presumed to have a less-than-significant impact. As described in Chapter 3, implementation of the proposed PMPU would include transportation infrastructure improvements to provide facilities for non-automobile travel modes to help balance all transportation modes along the North Harbor Drive corridor. The transportation-related planned improvements in PD2 would include the development of mobility hubs; reconfiguring of existing roadways to accommodate vehicle, pedestrian, bicycle, and transit traffic; and the development of a multi-use path (specific improvements within PD2 related to the transportation system are listed in further detail in the Impact Analysis for Threshold 1).

Because the Class I multi-use path and transit right-of-way improvements would provide additional multimodal transportation options and would promote alternatives to automobile use, they would be expected to result in fewer vehicle trips and reduce overall VMT. Therefore, the transportation improvements in PD2 would not induce travel, and the impacts on the transportation system would be less than significant.

However, the closure of the Laurel Drive/North Harbor Drive intersection is anticipated to improve roadway operations along Harbor Drive by relocating airport traffic to Laurel Street. Additionally,

the dedication of a two-way on-airport roadway, as is proposed within SANDAG's forthcoming Airport Access Study and the *North Harbor Drive Mobility & Access Study* (Chen Ryan 2018) will improve vehicular access to the SDIA by reducing the number of conflict points and signalized intersections through which vehicles need to travel between the regional transportation network and the airport terminals. Therefore, these improvements will result in improved travel times along Harbor Drive, which may lead travelers to take vehicular trips in lieu of other multimodal options. Therefore, these improvements are considered to induce travel based on route changes and newly generated trips, as described in Section 4.14.4.2.

Because some of the roadway network changes proposed as part of the proposed PMPU in PD2 would induce travel, the full buildout of the proposed PMPU in PD2 would result in a potentially significant impact (**Impact-TRA-3**). It should be noted that the total amount of induced VMT that may be associated with these improvements cannot be accurately quantified at this time because they will be made in conjunction with implementation of the broad PMPU, and not as a specific project. Additionally, the SANDAG Series 13 Transportation Forecast Model is only calibrated to calculate changes in VMT at a macro-level, and localized improvements at specific intersection locations or along single roadway segments cannot be accurately projected by the model. Finally, as noted in Section 4.14.4.2, the significance threshold for induced travel is no increase in overall VMT, meaning that if these improvements would incentivize any new vehicular trips or any increase in trip lengths, they would result in a significant impact. Therefore, based upon the analysis above, given that the impact of these improvements cannot be accurately quantified at this time due to the programmatic nature of the project, and that the threshold does not allow any increase in VMT, these improvements will result in some increase in VMT, therefore, resulting in a significant impact.

Accessibility Improvements

Planned improvements that would enhance existing accessibility features or develop new multimodal transit features in PD2 would include the development of a Local Gateway Mobility Hub in the West Harbor Island Subdistrict, a Regional Mobility Hub in the East Harbor Island Subdistrict, and the development and operation of a bayfront circulator that would provide access points through PD2, creating connections to PD1 and PD3. These planned improvements would encourage non-automobile use and would reduce VMT. Therefore, impacts would be less than significant.

Planning District 3: Embarcadero

All of PD3 is currently located within a TPA. Therefore, as per Section 15064(b)(1) of the State CEQA Guidelines, all VMT-related impacts associated with future development within PD3 are considered to be less than significant.

Table 4.14-9 summarizes the existing development and anticipated future growth under the proposed PMPU within PD3.

Table 4.14-9. Planning District 3 (Embarcadero) Projected Future Development¹

Land Use	Existing Quantity	Planned Growth Under PMPU	Total Quantity
Hotel (rooms)	5,189 rooms	850 rooms	6,039 rooms
Retail (square feet)	19.2 ksf	30 ksf	49.2 ksf
Restaurant (square feet)	237.2 ksf	27.5 ksf	264.7 ksf

Land Use	Existing Quantity	Planned Growth Under PMPU	Total Quantity
Retail and Restaurant – Standalone (square feet)	256.8 ksf	24.5 ksf	281.3 ksf
Commercial Fishing	4.0 acres	0.6 acres	4.6 acres
Recreational Boat Berthing	418 slips	150 slips	568 slips

ksf = thousand square feet

Employment VMT

As shown in Table 4.14-9, implementation of the proposed PMPU would result in future development in PD3. Based on the evaluation criteria outlined in Table 4.14-4, the VMT/Employee evaluation criterion would be applied to the hotel and commercial fishing land uses in PD3 to determine VMT impacts. To calculate the average VMT/Employee generated by PD3, the proposed PMPU land uses described in Chapter 3 were incorporated into the SANDAG Series 13 Year 2050 Regional Model, the results of which are provided in Table 4.14-10. See Appendix D for all model output results.

Table 4.14-10. Planning District 3 (Embarcadero) VMT Efficiency Metrics for Impact Analysis of Employment Uses

Land Use	Metric	Commercial Uses VMT/Employee (miles/person)
Hotel and Commercial Fishing	Base Year Regional Average	25.9
	Threshold ¹	22.0
	PMPU	15.1
	PMPU vs. Significance Threshold	6.8 miles under threshold (41.7% below Base Year Regional Average)
	2050 Regional Average	21.2
	Significance Threshold ¹	18.0
	PMPU	15.1
	PMPU vs. Significance Threshold	2.8 miles under threshold (28.8% below 2050 Regional Average)
	Significant Impact?	No

Source: SANDAG Regional Transportation Model, July 2019

¹15% below San Diego Regional Average (see Section 4.14.4.1)

As noted, all of PD3 is located within a TPA; therefore, pursuant to State CEQA Guidelines Section 15064.3(b)(1), VMT-related impacts associated with the future development allowed by the proposed PMPU in PD3 are presumed to be less than significant. Additionally, as shown in Table 4.14-10, the proposed PMPU's employment uses achieve a VMT reduction greater than 15 percent below the Base Year Regional Average VMT and 2050 Regional Average. Therefore, the increase in employment-related VMT uses within PD3 would be less than significant.

Retail, Restaurant, and Recreational VMT

Based on the evaluation criteria outlined in Table 4.14-4 and the development summarized in Table 4.14-9, the evaluation criteria for VMT impacts associated with the proposed water and land use

changes in PD3 are the net changes in total VMT without and with the proposed retail, restaurant, and recreational boat berthing water and land uses. Impacts are considered significant if future development of retail, restaurant, and recreational uses under the proposed PMPU would result in an increase in the total VMT for the planning district. Table 4.14-11 presents the 2050 Total VMT without and with the proposed PMPU for PD3.

Table 4.14-11. Planning District 3 (Embarcadero) Total VMT for Impact Analysis of Retail Uses

Land Use	2050 Total VMT		Net Growth	Significant Impact?
	PMPU Buildout with No New Retail and Recreational Uses	PMPU Buildout		
Retail				
Restaurant	597,051	607,685	10,643 (2%)	Yes
Recreational Boat Berthing				

As shown in Table 4.14-11, the total VMT in PD3 is expected to increase by 10,634 miles with implementation of the proposed PMPU, which would exceed the applicable significance threshold for retail, restaurant, and recreational boat berthing uses of no net growth by approximately 2 percent. Therefore, potential impacts related to VMT for these uses in PD3 would be significant prior to mitigation (**Impact-TRA-1**). It should be noted that these assumed uses will be located within a TPA, and therefore are presumed to have a less-than-significant impact, per State CEQA Guidelines Section 15064(b)(1). However, as these uses were identified to be associated with a net increase in VMT within the planning district, and may not be local serving in nature, their impact is still considered to be significant prior to mitigation.

Transportation Projects VMT

State CEQA Guidelines Section 15064.3(b)(2) provides that transportation projects that reduce or have no impact on VMT should be presumed to have a less-than-significant impact. As described in Chapter 3 the proposed PMPU includes transportation infrastructure improvements to provide facilities for non-automobile travel modes to help balance all travel modes along the North Harbor Drive corridor. The future transportation-related improvements that may be developed in PD3 include the reconfiguration of existing roadways for more efficient accommodation of vehicular traffic; the extension of facilities for pedestrian, bicycle, and vehicle use on A Street to North Harbor Drive; and the closure of Market Street between West Harbor Drive and Columbia Street (specific improvements within PD3 related to the transportation system are listed in further detail in the Impact Analysis for Threshold 1).

Because the multi-use pedestrian and bicycle facilities and transit right-of-way improvements would provide additional multimodal transportation options and would promote alternatives to automobile use, they would be expected to result in fewer automobile trips and reduce VMT. Therefore, future transportation improvements in PD3 would not induce travel, and the effect on the transportation system would be beneficial, helping to reduce transportation-related impacts.

However, the closure of Market Street between West Harbor Drive and Columbia Street would reduce delay at the Harbor Drive/Market Street intersection, resulting in reduce travel times along Harbor Drive. This reduction in travel time could incentivize travelers to take vehicular trips in lieu

of other multimodal options, resulting in induced travel demands and the generation of additional VMT. Similarly, the proposed extension of A Street between Pacific Highway and North Harbor Drive would reduce vehicular demand along parallel roadways such as Ash Street and Broadway. The reduction in vehicular demand along these roadways would result in improved traffic operations along both corridors and could incentivize travelers to take vehicular trips in lieu of other multimodal options, resulting in induced travel demands and the generation of additional VMT. Thus, implementation of these improvements could potentially induce travel based on route changes and newly generated trips, as described in Section 4.14.4.2. Because some of the roadway network changes included in the proposed PMPU for PD3 would potentially induce travel, there would be a significant impact (**Impact-TRA-3**). It should be noted that the total amount of induced VMT that may be associated with these improvements cannot be accurately quantified at this time because they will be made in conjunction with implementation of the broad PMPU, and not as a specific project. Additionally, the SANDAG Series 13 Transportation Forecast Model is only calibrated to calculate changes in VMT at a macro-level, and localized improvements at specific intersection locations or along single roadway segments cannot be accurately projected by the model. Finally, as noted in Section 4.14.4.2, the significance threshold for induced travel is no increase in overall VMT, meaning that if these improvements would incentivize any new vehicular trips or any increase in trip lengths, they would result in a significant impact. Therefore, based upon the analysis above, given that the impacts of these improvements cannot be accurately quantified at this time due to the programmatic nature of the project, and that the threshold does not allow any increase in VMT, it is assumed that these improvements would result in some increase in VMT, therefore, resulting in a significant impact.

Accessibility Improvements

Future improvements that may occur in PD3 include enhancing existing accessibility features or developing new infrastructure for improved accessibility to the bayfront. These include the development of a Regional Mobility Hub in North Embarcadero Subdistrict, and the modification or replacement-in-kind of the existing Local Gateway Mobility Hub in the South Embarcadero Subdistrict. The proposed PMPU would also develop and operate a bayfront circulator in PD3 that would connect to PD1 and PD2. These future improvements would encourage non-automobile use throughout PD3, and would reduce automobile trips and reduce VMT related to implementation of the PMPU. However, because it is not yet known when the mobility hubs and the circulator would be implemented in relation to the roadway improvements that may induce automobile travel in PD3, these accessibility improvements may not reduce VMT-related impacts from implementation of the PMPU to a less-than-significant level.

Planning District 4: Working Waterfront

The entirety of PD4 is currently located within a TPA. Therefore, per Section 15064(b)(1) of the State CEQA Guidelines, all VMT-related impacts associated with future development within PD4 are considered to be less than significant.

Table 4.14-12 summarizes the existing and future land uses within PD4, and the anticipated growth associated with these land uses.

Table 4.14-12. Planning District 4 (Working Waterfront) Projected Future Development

Land Use	Existing Quantity	Planned Growth Under PMPU	Total Quantity
Annual Cargo Throughput	1,015,894 metric tons ¹	3,659,673 metric tons	4,675,567 metric tons ³
Marine Terminal Employees	850 employees ²	524 employees ³	1,374 employees
Working Waterfront Employees	5,400 employees ²	0 employees	5,400 employees

¹ Based on 2016 wharfing data provided by the District.

² Source: SANDAG Series 13 Model Data.

³ Source: TAMT EIR.

Employment VMT

As shown in Table 4.14-12, the proposed PMPU does not propose any change in the amount of annual cargo throughput or the number of marine terminal employees previously analyzed in the certified TAMT EIR and approved by the District in the TAMT Redevelopment Plan. Information related to TAMT and the TAMT Redevelopment Plan is included for informational purposes only. In addition, there would be no change in permanent Working Waterfront employees (i.e., shipyard employees) as a result of the proposed PMPU given the built-out nature of the Working Waterfront. Based on the evaluation criteria outlined in Table 4.14-4 and the land uses summarized in in Table 4.14-12, the significance criterion used to determine the VMT impacts associated with the increase in employment in PD4 would be VMT/Employee. To calculate the average VMT/Employee generated by PD4, the proposed PMPU land uses were incorporated into the SANDAG Series 13 Year 2050 Regional Model, the results of which are provided in Table 4.14-13. Model output results are presented in Appendix D.

Table 4.14-13. Planning District 4 (Working Waterfront) VMT Efficiency Metrics for Impact Analysis of Employment Uses

Land Use	Metric	Non-Commercial Uses VMT/Employee (miles/person)
Marine Terminal	Base Year Regional Average	25.9
	Threshold (for informational purposes) ¹	22.0
	PMPU	17.2
	PMPU vs. Significance Threshold	4.8 miles under threshold (33.6% below Base Year Regional Average)
	2050 Regional Average	21.2
	Significance Threshold ¹	18.0
	PMPU	17.2
	PMPU vs. Significance Threshold	0.8 miles under threshold (18.9% below 2050 Regional Average)
	Significant Impact?	No

Source: SANDAG Regional Transportation Model, July 2019

¹ 15% below San Diego Regional Average (see Section 4.14.4.1)

As shown in the table above, the proposed PMPU’s employment uses achieve a VMT reduction greater than 15 percent below the 2050 Regional Average. Therefore, the increase in employment-related VMT within PD4 would be less than significant.

Retail, Restaurant, and Recreational VMT

Based on the land uses summarized in Table 4.14-12, there is no anticipated growth for retail, restaurant, or recreational uses in PD4. Therefore, conditions would remain the same as existing conditions, and impacts on the transportation system would be less than significant.

Transportation Projects VMT

State CEQA Guidelines Section 15064.3(b)(2) provides that transportation projects that reduce or have no impact on VMT should be presumed to have a less-than-significant impact. Transportation-related improvements that may occur in PD4 would include modification of existing roadways, including Harbor Drive and Cesar Chavez Parkway, and modification of multi-use pathways. Transit right-of-way improvements would provide additional multimodal transportation options and would promote alternatives to automobile use, and therefore would be expected to result in fewer automobile trips and reduce VMT. Transportation improvements in PD4 would not induce travel, and the effect on the transportation system would be beneficial, helping to reduce transportation-related impacts. Therefore, impacts would be less than significant.

Accessibility Improvements

There are no planned improvements that would be considered accessibility improvements proposed for PD4.

Planning District 7: South Bay

There are no planned improvements in PD7 under the proposed PMPU; therefore, VMT impacts would be less than significant.

Planning District 8: Imperial Beach Oceanfront

The entirety of PD8 is currently located within a TPA. Therefore, per Section 15064(b)(1) of the State CEQA Guidelines, all VMT-related impacts associated with future development within PD8 are considered to be less than significant.

Table 4.14-14 summarizes the existing and future land uses within PD8, as well as the anticipated growth associated with each land use.

Table 4.14-14. Planning District 8 (Imperial Beach Oceanfront) Projected Future Development

Land Use	Existing Quantity	Planned Growth Under PMPU	Total Quantity
Retail and Restaurant (square feet)	2.0 ksf	18 ksf	20 ksf

ksf = thousand square feet

Employment VMT

As shown in Table 4.14-14, the existing retail and restaurant space is proposed to increase by 17,200 square feet in PD8 with implementation of the proposed PMPU. Based on the evaluation

criteria outlined in Table 4.14-4 and the water and land uses summarized in Table 4.14-13, there are no proposed water or land uses in PD8 that would be subject to the VMT/Employee criterion; therefore, the employment VMT in PD8 would be less than significant.

Retail, Restaurant, and Recreational VMT

Based on the evaluation criteria outlined in Table 4.14-4 and the future development summarized in Table 4.14-13, the evaluation criterion for VMT impacts is the net change in the Total VMT (with and without the proposed retail and restaurant uses). Table 4.14-15 presents the 2050 Total VMT without and with the proposed PMPU. Potential impacts would be significant if future development of retail and restaurant uses allowed under the proposed PMPU in PD8 resulted in an increase in the total VMT for the planning district.

Table 4.14-15. Planning District 8 (Imperial Beach Oceanfront) Total Regional VMT for Impact Analysis of Retail Uses

Land Use	2050 Total VMT		Net Growth	Significant Impact?
	PMPU Buildout with No New Retail and Recreational Uses	PMPU Buildout		
Retail and Restaurant	8,398	10,062	+1,664 (+20%)	Yes

As shown, the total VMT in PD8 is expected to increase by 1,664 miles with implementation of the proposed PMPU, which would exceed the applicable significance threshold for retail and restaurant uses of no net growth by approximately 20 percent. Therefore, potential impacts related to VMT for retail and restaurant uses would be significant (**Impact-TRA-1**). It should be noted that these assumed uses would be located within a TPA, and therefore are presumed to have a less-than-significant impact pursuant to State CEQA Guidelines Section 15064.3 (b)(1). However, because these uses were identified as being associated with a net increase in VMT within the planning district, and may not be local serving in nature, their impact is still considered to be significant.

Transportation Projects VMT

There are no proposed transportation improvements in PD8.

Accessibility Improvements

The accessibility improvements proposed for PD8 would include the development of a Connector Mobility Hub in the vicinity of Seacoast Drive and Elkwood Avenue. Implementation of a mobility hub would encourage non-automobile travel, which would reduce automobile trips and contribute to the reduction of VMT.

Planning District 9: Silver Strand

There are no TPAs currently located within PD9. Therefore, VMT related impacts that may potentially be associated with the assumed future development allowed by the proposed PMPU, within the Planning District, must be analyzed to identify if they may be associated with a potential transportation related impact.

Table 4.14-16 summarizes the existing and future land uses within the planning district, as well as the anticipated growth associated with the land use changes.

Table 4.14-16. Planning District 9 (Silver Strand) Projected Future Development

Land Use	Existing Quantity	Planned Growth Under PMPU	Total Quantity
Hotel with Retail and Restaurant (rooms)	440 rooms	0 rooms	440 rooms
Retail (square feet)	0 ksf	0.0 ksf	0 ksf
Recreational Boat Berthing (slips)	164 slips	20 slips	184 slips

ksf = thousand square feet

Employment VMT

Based on the evaluation criteria outlined in Table 4.14-4 and the water and land uses summarized in Table 4.14-15, there are no proposed water or land uses in PD9 that would be subject to the VMT/Employee criterion; therefore, the employment VMT in PD9 would be less than significant.

Retail, Restaurant, and Recreational VMT

As shown in Table 4.14-16, the proposed PMPU would allow for the development of up to 20 additional recreational boat berthing slips. While their addition would not affect employment-based VMT, it would still generate additional vehicle trips and associated VMT from marina users. Because the threshold for recreational boat berthing uses is no net increase in VMT, any additional VMT generated would be considered a significant impact. Therefore, the addition of 20 recreational boat slips in PD9 would result in a significant VMT-related impact (**Impact-TRA-1**).

Transportation Projects VMT

There are no planned transportation improvements in PD9.

Accessibility Improvements

The accessibility improvements proposed for PD9 would include the development of a Connector Mobility Hub, or larger hub, in the Crown Isle Subdistrict. Implementation of a mobility hub would encourage alternatives to automobile travel, and therefore would reduce automobile trips and contribute to the reduction of VMT.

Planning District 10: Coronado Bayfront

The northern portion of PD10, around the ferry landing, is located within a TPA. Outside of this area the VMT-related impacts that may potentially be associated with the assumed future development, allowed by the proposed PMPU, must be analyzed to identify if they may be associated with a potential transportation-related impact.

Table 4.14-17 summarizes the existing and future land uses within PD10, as well as the anticipated growth associated with the land use changes.

Table 4.14-17. Planning District 10 (Coronado Bayfront) Project Future Development

Land Use	Existing Quantity	Planned Growth Under PMPU	Total Quantity
Hotel Only (rooms)	300 rooms	0 rooms	300 rooms
Retail (square feet)	1.6 ksf	0.0 ksf	1.6 ksf
Restaurant (square feet)	17.3 ksf	0.0 ksf	17.3 ksf
Retail and Restaurant – Standalone (square feet)	47.5 ksf	0.0 ksf	47.5 ksf
Recreational Boat Berthing	364 slips	55 slips	419 slips

ksf = thousand square foot

Employment VMT

Based on the evaluation criteria outlined in Table 4.14-4 and the water and land uses summarized in Table 4.14-16, there are no proposed water or land uses in PD10 that would be subject to the VMT/Employee criterion. Therefore, the employment VMT in PD10 would be less than significant.

Retail, Restaurant, and Recreational VMT

As shown in Table 4.14-17, the proposed PMPU would allow for the development of up to 55 additional recreational boat berthing slips. While their addition would not affect employment-based VMT, it would still generate additional vehicle trips and associated VMT from marina users. Because the threshold for recreational boat berthing uses is no net increase in VMT, any additional VMT generated would be considered a significant impact. Therefore, the addition of 55 recreational boat slips in PD10 would result in a significant VMT-related impact (**Impact-TRA-1**).

Transportation Projects VMT

There are no planned transportation improvements in PD10.

Accessibility Improvements

The accessibility improvements proposed for PD10 would include the development of a Local Gateway Mobility Hub or larger hub, near the existing Coronado Ferry Landing. Implementation of a mobility hub would encourage alternatives to automobile travel, and therefore would reduce automobile trips and contribute to the reduction of VMT.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, one of three options within the North Embarcadero Subdistrict could be selected by the Board, if the proposed PMPU is approved. Each of these options shows alternative project components from that of the proposed PMPU, as illustrated in Figures 3-5, 3-6, and 3-7. Operational impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

Option 1 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 1 include the closure of North Harbor Drive from the prolongation of West G Street to Broadway, as well as the construction

and operation of a Waterfront Destination Park. Under Option 1, there would be an increase in Commercial Recreation and Recreation Open Space and a decrease in Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 1 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU would result in significant impacts related to the increase Total VMT associated with future development consistent with the proposed PMPU in PD1, PD2, PD3, PD8, PD9, and PD10, and increase in VMT/Employee in PD2 (**Impact-TRA-1** and **Impact-TRA-2**). **Impact-TRA-1** would still occur in PD3 under Option 1.

Employment VMT

Because employment-based land uses proposed under this option would be consistent with those analyzed above, the land use assumptions for Option 1 would be consistent with the findings outlined in Table 4.14-10. It should be noted that all of PD3 is located within 0.5 mile of a major transit stop. Therefore, pursuant to State CEQA Guidelines Section 15064.3(b)(1), the transportation-related impacts associated with the proposed employment land uses under Option 1 would be considered to have a less-than-significant transportation impact.

Retail, Restaurant, and Recreational VMT

Option 1 proposes to increase the Commercial Recreation land uses within PD3 by 1.5 acres compared to the analysis in Table 4.14-11. This increase in land uses would contribute to the impacts related to VMT for retail and recreational uses in PD3. Therefore, potential impacts related to VMT for these uses in PD3 would be significant (**Impact-TRA-1**). These assumed uses would be located within a TPA and therefore can be considered to have a less-than-significant impact. However, because these uses are associated with a net increase in VMT within the planning district, and may not be local-serving in nature, their impact is considered to be significant. Therefore, the transportation-related impacts associated with the proposed retail land uses under Option 1 are considered to be significant.

Transportation Projects VMT

Option 1 would include the same transportation infrastructure improvements as discussed above in the analysis for PD3, but would also include the closure of North Harbor Drive between G Street and Broadway.

Because the multi-use pedestrian and bicycle facilities and transit right-of-way improvements would provide additional multimodal transportation options and would promote alternatives to automobile use, they would be expected to result in fewer automobile trips and reduce VMT. Therefore, transportation improvements in PD3 would not induce travel, and the effect on the transportation system would be beneficial, helping to reduce transportation-related impacts.

However, the closure of Market Street between West Harbor Drive and Columbia Street would reduce delay at the Harbor Drive/Market Street intersection, resulting in reduced travel times along Harbor Drive. This reduction in travel time could incentivize travelers to take vehicular trips in lieu of other multimodal options, resulting in induced travel demands and the generation of additional VMT. Similarly, the proposed extension of A Street between Pacific Highway and North Harbor Drive would reduce vehicular demand along parallel roadways such as Ash Street and Broadway. The reduction in vehicular demand along these roadways would result in improved traffic operations along both corridors and could incentivize travelers to take

vehicular trips in lieu of other multimodal options, resulting in induced travel demands and the generation of additional VMT. Thus implementation of these improvements could potentially induce travel based on route changes and newly generated trips, as described in Section 4.14.4.2. Because some of the roadway network changes included in the proposed PMPU for PD3 would potentially induce travel, there would be a significant impact (**Impact-TRA-3**). It should be noted that the total amount of induced VMT that may be associated with these improvements cannot be accurately quantified at this time because they would be made in conjunction with implementation of the proposed PMPU, and not in isolation. Additionally, the SANDAG Series 13 Transportation Forecast Model is only calibrated to calculate changes in VMT at a macro-level, and localized improvements at specific intersection locations or along single roadway segments cannot be accurately projected by the model. Finally, as noted in Section 4.14.4.2, the significance threshold for induced travel is no increase in overall VMT, meaning that if these improvements would incentivize any new vehicular trips or any increase in trip lengths, they would result in a significant impact. Therefore, because the impacts of these improvements cannot be accurately quantified at this time and the threshold does not allow any increase in VMT, to be conservative, it is assumed that these improvements would result in some increase in VMT, and the impact would be significant.

Accessibility Improvements

Planned improvements for PD3 under Option 1 would be the same as described in the above analysis for PD3. These planned improvements would encourage non-automobile use throughout PD3, and would reduce automobile trips and reduce VMT associated with the implementation of the PMPU (**Impact-TRA-1** and **Impact-TRA-2**). However, because it is not yet known when the mobility hubs and the circulator would be implemented in relation to the roadway improvements that may induce automobile travel in PD3, these accessibility improvements would not reduce potential VMT-related impacts to a less-than-significant level.

Option 2: 205-Foot Setback East of North Harbor Drive

Option 2 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. Implementation of Option 2 would primarily result in additional Recreation Open Space compared to the proposed PMPU by establishing an average 205-foot setback adjacent to the east side of the present alignment of North Harbor Drive, running from Hawthorn Street to the prolongation of B Street, which is north of the Lane Field Setback Park. With the establishment of the 205-foot setback under Option 2, the existing Lane Field Setback Park would be contiguously expanded north. Under Option 2, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 2 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU would result in significant impacts related to the increase Total VMT associated with future development consistent with the proposed PMPU in PD1, PD2, PD3, PD8, PD9, and PD10, and the increase in VMT/Employee in PD2 (**Impact-TRA-1** and **Impact-TRA-2**). **Impact-TRA-1** would still occur in PD3 under Option 2.

Employment VMT

Because employment-based land uses proposed under this option would be consistent with those analyzed above, the land use assumptions for Option 2 would be consistent with the findings outlined in Table 4.14-10. All of PD3 is located within 0.5 mile of a major transit stop. Therefore, pursuant to State CEQA Guidelines Section 15064.3(b)(1), the transportation-related impacts associated with the proposed employment land uses under Option 2 would be considered to have a less-than-significant transportation impact.

Retail, Restaurant, and Recreational VMT

As shown in Table 4.14-11, the total VMT in PD3, under the proposed PMPU, is expected to increase by 10,634 miles, which would exceed the applicable significance threshold for retail, restaurant, and recreational boat berthing uses of no net growth by approximately 2 percent. Even though Option 2 proposes to decrease the Commercial Recreation land uses within PD3 by 3.3 acres (3.5 percent), it is assumed that this decrease would only have a nominal effect on the total VMT generated within PD3, and thus would be consistent with the findings in Table 4.14-11. Therefore, potential impacts related to VMT for these uses in PD3 would be significant (**Impact-TRA-1**). These assumed uses would be located within a TPA and therefore can be considered to have a less-than-significant impact. However, because these uses were identified to be associated with a net increase in VMT within the planning district, and may not be local-serving in nature, their impact is considered to be significant. Therefore, the transportation-related impacts associated with the proposed retail land uses under Option 2 are considered to be significant.

Transportation Projects VMT

Option 2 would include the same transportation infrastructure improvements as discussed above in the analysis for PD3.

Because the multi-use pedestrian and bicycle facilities and transit right-of-way improvements would provide additional multimodal transportation options and would promote alternatives to automobile use, they would be expected to result in fewer automobile trips and reduce VMT. Therefore, transportation improvements in PD3 would not induce travel, and the effect on the transportation system would be beneficial, helping to reduce transportation-related impacts.

However, the closure of Market Street between West Harbor Drive and Columbia Street would reduce delay at the Harbor Drive/Market Street intersection, resulting in reduced travel times along Harbor Drive. This reduction in travel time could incentivize travelers to take vehicular trips in lieu of other multimodal options, resulting in induced travel demands and the generation of additional VMT. Similarly, the proposed extension of A Street between Pacific Highway and North Harbor Drive would reduce vehicular demand along parallel roadways such as Ash Street and Broadway. The reduction in vehicular demand along these roadways would result in improved traffic operations along both corridors and could incentivize travelers to take vehicular trips in lieu of other multimodal options, resulting in induced travel demands and the generation of additional VMT. Thus implementation of these improvements could potentially induce travel based on route changes and newly generated trips, as described in Section 4.14.4.2. Because some of the roadway network changes included in the proposed PMPU for PD3 would potentially induce travel, there would be a significant impact (**Impact-TRA-3**). It should be noted that the total amount of induced VMT that may be associated with these improvements

cannot be accurately quantified at this time because they will be made in conjunction with implementation of the proposed PMPU, and not in isolation. Additionally, the SANDAG Series 13 Transportation Forecast Model is only calibrated to calculate changes in VMT at a macro-level, and localized improvements at specific intersection locations or along single roadway segments cannot be accurately projected by the model. Finally, as noted in Section 4.14.4.2, the significance threshold for induced travel is no increase in overall VMT, meaning that if these improvements would incentivize any new vehicular trips or any increase in trip lengths, they would result in a significant impact. Therefore, because the impacts of these improvements cannot be accurately quantified at this time and the threshold does not allow any increase in VMT, to be conservative, it is assumed that these improvements would result in some increase in VMT, and impacts would be significant.

Accessibility Improvements

Planned improvements for PD3 in Option 2 would be the same as described in the above analysis for PD3. These planned improvements would encourage non-automobile use throughout PD3, and would reduce automobile trips and reduce VMT associated with the implementation of the PMPU (**Impact-TRA-1** and **Impact-TRA-2**). However, because it is not yet known when the mobility hubs and the circulator would be implemented in relation to the roadway improvements that may induce automobile travel in PD3, these accessibility improvements would not reduce potential VMT-related impacts to a less-than-significant level.

Option 3: 205-Foot Setback West of North Harbor Drive

Option 3 would include the same water and land uses for PD3 and would generally involve the same types of operational activities described above for the proposed PMPU, but in different acreages and configurations. The primary components of Option 3 include the realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street, the establishment of a 205-foot setback to the immediate west of the realigned North Harbor Drive, and the addition of land from several properties. Under Option 3, there would be an increase in Recreation Open Space and a decrease in Commercial Recreation and Institutional/Roadway compared to the proposed PMPU. A detailed description of Option 3 is provided in Chapter 3.

As discussed above, implementation of the proposed PMPU would result in significant impacts related to the increase in Total VMT associated with future development consistent with the proposed PMPU in PD1, PD2, PD3, PD8, PD9, and PD10, and the increase in VMT/Employee in PD2 (**Impact-TRA-1** and **Impact-TRA-2**). **Impact-TRA-1** would still occur in PD3 under Option 3.

Employment VMT

Because employment-based land uses proposed under this option would be consistent with those analyzed above, the land use assumptions for Option 3 would be consistent with the findings outlined in Table 4.14-10. All of PD3 is located within 0.5 mile of a major transit stop. Therefore, pursuant to State CEQA Guidelines Section 15064.3(b)(1), the transportation-related impacts associated with the proposed employment land uses under Option 3 would be considered to have a less-than-significant transportation impact.

Retail, Restaurant, and Recreational VMT

As shown in Table 4.14-11, the total VMT in PD3, under the proposed PMPU, is expected to increase by 10,634 miles, which would exceed the applicable significance threshold for retail, restaurant, and recreational boat berthing uses of no net growth by approximately 2 percent. Option 3 proposes to increase the Commercial Recreation land uses within PD3 by 0.8 acre (0.9%) compared to the analysis in Table 4.14-11. This increase in Commercial Recreation land uses would contribute to the impacts related to VMT for the retail and recreational uses in PD3. Therefore, potential impacts related to VMT for these uses in PD3 would be significant (**Impact-TRA-1**). These assumed uses would be located within a TPA and therefore can be considered to have a less-than-significant impact. However, because these uses were identified to be associated with a net increase in VMT within the planning district, and may not be local serving in nature, their impact is considered to be significant. Therefore, the transportation-related impacts associated with the proposed retail land uses under Option 3 are considered to be significant.

Transportation Projects VMT

Option 3 would include the same transportation infrastructure improvements as discussed above in the analysis for PD3, but would also include the realignment of Harbor Drive from Hawthorne Street to B Street.

Because the multi-use pedestrian and bicycle facilities and transit right-of-way improvements would provide additional multimodal transportation options and would promote alternatives to automobile use, they would be expected to result in fewer automobile trips and reduce VMT. Therefore, transportation improvements in PD3 would not induce travel, and the effect on the transportation system would be beneficial, helping to reduce transportation-related impacts.

However, the closure of Market Street between West Harbor Drive and Columbia Street would reduce delay at the Harbor Drive/Market Street intersection, resulting in reduced travel times along Harbor Drive. This reduction in travel time could incentivize travelers to take vehicular trips in lieu of other multimodal options, resulting in induced travel demands and the generation of additional VMT. Similarly, the proposed extension of A Street between Pacific Highway and North Harbor Drive would reduce vehicular demand along parallel roadways such as Ash Street and Broadway. The reduction in vehicular demand along these roadways would result in improved traffic operations along both corridors and could incentivize travelers to take vehicular trips in lieu of other multimodal options, resulting in induced travel demands and the generation of additional VMT. Thus implementation of these improvements could potentially induce travel based on route changes and newly generated trips, as described in Section 4.14.4.2.

Because some of the roadway network changes included in the proposed PMPU for PD3 would potentially induce travel, there would be a significant impact (**Impact-TRA-3**). It should be noted that the total amount of induced VMT that may be associated with these improvements cannot be accurately quantified at this time because they would be made in conjunction with implementation of the proposed PMPU, and not in isolation. Additionally, the SANDAG Series 13 Transportation Forecast Model is only calibrated to calculate changes in VMT at a macro-level, and localized improvements at specific intersection locations or along single roadway segments cannot be accurately projected by the model. Finally, as noted in Section 4.14.4.2, the significance threshold for induced travel is no increase in overall VMT, meaning that if these

improvements would incentivize any new vehicular trips or any increase in trip lengths, they would result in a significant impact. Therefore, because the impacts of these improvements cannot be accurately quantified at this time and the threshold does not allow any increase in VMT, to be conservative, it is assumed that these improvements would result in some increase in VMT, and impacts would be significant.

Accessibility Improvements

Planned improvements for PD3 in Option 3 would be the same as described in the above analysis for PD3. These planned improvements would encourage non-automobile use throughout PD3, and would reduce automobile trips and reduce VMT associated with the implementation of the PMPU (**Impact-TRA-1** and **Impact-TRA-2**). However, because it is not yet known when the mobility hubs and the circulator would be implemented in relation to the roadway improvements that may induce automobile travel in PD3, these accessibility improvements would not reduce potential VMT-related impacts to a less-than-significant level.

Operation Impact Summary

Future development under the proposed PMPU would result in a net increase in VMT in PD1 PD2, PD3, PD8, PD9, and PD10 as a result of developing retail, restaurant, and recreational land uses in the future. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b) and thus a significant impact related to the proposed PMPU (**Impact-TRA-1**). Potential significant impacts would occur as a result of implementation of the proposed PMPU. In PD2, the proposed PMPU's employment uses do not achieve a VMT reduction of 15 percent below the 2050 Regional Average. Therefore, the significant impact associated with the increase in employment-related VMT in PD2 would result in a significant impact for the proposed PMPU (**Impact-TRA-2**). Additionally, improvements to existing transportation infrastructure in PD2 and PD3 would increase VMT by making vehicle trips more attractive within these planning districts and thereby induce travel. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b) and thus a significant impact related to the proposed PMPU (**Impact-TRA-3**).

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies listed in Section 4.14.4.3 would not result in impacts related to the increase in VMT that would conflict with or be inconsistent with State CEQA Guidelines Section 15064.3 subdivision (b). The proposed policies would support the development of multimodal infrastructure to encourage the use of all non-automobile transit options (pedestrian, bicycle, public transit routes), which would reduce automobile trips in the proposed PMPU area, and contribute to the reduction of VMT. For instance, a network of pathways and water-based transfer points will connect the waterfront (WLU Policy 3.1.1); the District will coordinate with transportation agencies to explore opportunities to expand accessible transit service to Tidelands (M Policy 1.1.9); the District will develop TDM guidelines and require development to comply with such guidelines, with the intent to reduce dependence on single-occupancy vehicles and reduce vehicle miles traveled to, from, and within Tidelands (M Policy 1.1.11); and the District will require the planning, designing, and implementation of a network of mobility hubs (Regional, Local Gateway, and Connector) that provide the opportunity for users to change from one mode of travel to another (M Policy 1.2.1).

Impact Determination and Mitigation

Implementation of the proposed PMPU would conflict with or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b).

Significant Impacts

Impact-TRA-1: Increase in Total VMT Associated with Future Development Consistent with the Proposed PMPU. Future development under the proposed PMPU would result in a net increase in VMT in PD1, PD2, PD3, PD8, PD9, and PD10 as a result of developing retail, restaurant, and recreational land uses in the future. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b).

Impact-TRA-2: Increase in VMT/Employee Associated with Future Development Consistent with the Proposed PMPU. Future development under the proposed PMPU would result in an average VMT per employee above the 2050 Regional Average within PD2. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b).

Impact-TRA-3: Increase in VMT Due to Transportation Infrastructure Improvements Associated with the Proposed PMPU. Implementation of the proposed PMPU would include improvements to existing transportation infrastructure in PD2 and PD3, which would increase VMT by making vehicle trips more attractive within these planning districts and thereby inducing travel. This would result in a conflict with State CEQA Guidelines Section 15064.3, subdivision (b).

Mitigation Measures

For **Impact-TRA-1**, **Impact-TRA-2**, and **Impact-TRA-3**:

MM-TRA-1: Establish a Transportation Impact Fee Program. Consistent with ECON Policy 1.2.6 of the proposed PMPU, prior to approval of the first future development project allowed under the proposed PMPU, the District shall establish an impact fee program for the funding of transportation infrastructure improvements that would reduce VMT, including mobility hubs, pedestrian improvements, and other mobility-related infrastructure and amenities specified in the proposed PMPU. The impact fee program will identify needed improvements throughout the PMPU area consistent with Chapter 4, *Baywide Development Standards*, of the proposed PMPU and include guidelines to determine the proportionate fair share contributions by public and private project proponents on a case-by-case basis and based on the project's contribution to VMT within the proposed PMPU area. These improvements may be implemented through a combination of private investments, public investments, and private-public partnerships based on a schedule established by the District to minimize and offset VMT-related impacts on the transportation system from future PMPU-related development. The fee program shall be in place prior to approval of the first future development project associated with the proposed PMPU.

MM-TRA-2: Contribute Fair Share Impact Fees. During project-specific environmental review for all future projects proposed consistent with the PMPU, the project proponent(s) shall prepare project-specific studies to identify the appropriate fees that will constitute a fair share contribution based on the impacts of individual projects in accordance with the fee program established under **MM-TRA-1**. Once the appropriate fees have been determined by the District, the project proponent shall pay its proportionate fair share contribution to the District prior to

the issuance of a building permit. Payment into the fee program based upon pre-established formulas developed as part of **MM-TRA-1** will serve as mitigation for project-specific VMT-related impacts. Project proponents shall also contribute development impact fees to the applicable member cities that have jurisdiction over the issuance of building permits for future projects. This would include the City of San Diego (Municipal Code Section 142.0640), City of Imperial Beach (Municipal Code Section 15.48), and City of Coronado (Municipal Code Section 8.20). The project proponent shall pay the applicable development impact fee required by the local jurisdiction at the time required by the local jurisdiction.

MM-TRA-3: Implement a Transportation Demand Management Plan. Prior to the approval of future development projects proposed in PD2, PD3 PD8, PD9, or PD10, the project proponent shall prepare and submit to the District for approval a TDM Plan as listed in the most recent Regional Transportation Plan prepared by SANDAG. The TDM Plan shall include measures, such as ridesharing initiatives (e.g., carpooling), promoting alternative work schedules and telework, subsidizing employee use of public transit, and promoting bicycling, walking, and the use of public transit, to reduce VMT either to 15 percent below the regional average (for future employment VMT generating uses [e.g., hotels] in PD2) or to no net increase in VMT (for future retail, restaurant, and recreational projects in PD2, PD3, PD8, PD9, or PD10). The project proponent shall implement the TDM Plan prior to and during project operations.

Level of Significance After Mitigation

In order to reduce potential impacts related to the increase of Total VMT (**Impact-TRA-1**) and VMT/Employee (**Impact-TRA-2**), as well as increased VMT induced by certain transportation infrastructure improvements in PD2 and PD3 (**Impact-TRA-3**), **MM-TRA-1** requires the District to develop an impact fee program, consistent with proposed PMPU ECON Policy 1.2.6, to fund transportation infrastructure improvements that would reduce VMT. **MM-TRA-1** requires this fee program to be established prior to approval of the first future development project associated with the proposed PMPU. Once the impact fee program has been developed, project proponents would be required to make a proportionate fair share contribution to the District-implemented impact fee program to develop and expand VMT-reducing infrastructure, including, but not limited to, mobility hubs (**MM-TRA-2**). However, because the timing and exact location of infrastructure improvements have not been identified, and the funding programs have not yet been implemented, it cannot be guaranteed that the necessary improvements would be implemented prior to the operation of any new development under the proposed PMPU.

Implementation of a TDM Plan (**MM-TRA-3**) would also provide incentives to use alternative modes of transportation instead of individual vehicles, which would reduce VMT induced by development projects and improvements to transportation infrastructure. However, it is not possible to quantify the effectiveness of the recommended mitigation measures because the location, timing, and design of new development allowed under the proposed PMPU is unknown at this time.

Thus, after the incorporation of mitigation, **Impact-TRA-1**, **Impact-TRA-2**, and **Impact-TRA-3** would remain significant and unavoidable.

Threshold 3: Substantially increase hazards due to a geometric design feature or incompatible uses?**Impact Analysis**

Impacts on transit circulation would occur if the proposed PMPU would substantially increase hazards due to a design feature or incompatible uses. Similarly, impacts related to pedestrian and bicycle circulation would occur if the proposed PMPU would substantially increase hazards due to a design feature. Impacts on the pedestrian and bicycle circulation system were considered through a review of the proposed water and land use scenarios and existing pedestrian and bicycle facilities within each planning district.

Impacts of Water and Land Uses

Future transportation improvement projects allowed under the proposed PMPU would result in physical improvements to existing pedestrian and bicycle facilities, as well as existing road right-of-way, to improve accessibility, encourage the use of public transit and multimodal facilities, and decrease conflict between vehicles, bicycles, and pedestrians. These improvements would occur in PD1, PD2, PD3, and PD4 (as described in Threshold 1), and would be constructed throughout the 30-year planning period of the proposed PMPU (i.e., 2050). The multimodal infrastructure improvements would create a safer environment for bicyclists and pedestrians within these three planning districts. Roadway improvements proposed in each of these planning districts are intended to improve efficiency of travel for vehicles and accommodate pedestrians, bicyclists, and/or the bayfront circulator or other public transit usage. These proposed transportation improvement projects have not yet been designed; however, each project would be designed in accordance with applicable standards, including the City of San Diego's *Street Design Manual* for roadway and bicycle improvement projects (given their location within the City of San Diego), and any applicable Baywide Development Standards identified in Chapter 4 of the proposed PMPU for pedestrian facility (e.g., promenade) projects. Final plans for transportation improvement projects would be subject to the review and approval by the City of San Diego's traffic engineer (for roadway and bicycle facility improvements) and/or the District (for pedestrian facility improvements) to ensure the proposed improvement would not result in hazardous design features.

In addition, mobility hubs are proposed in PD1, PD2, PD3, PD9, and PD10. Mobility hubs would provide access to multiple forms of transit, including both land-based transit (e.g., the District's Bayfront Circulator and/or MTS transit routes) and water-based transit (e.g., ferries or water taxis) and a direct connection to the various amenities within the proposed PMPU area. Mobility hubs would also provide safe and well-delineated pedestrian bicycle paths to nearby attractions and uses. The proposed PMPU does not identify the exact location and timing for development of mobility hubs, although potential locations of mobility hubs are provided within the specific planning district elements within Chapter 5 of the proposed PMPU. However, at the time of implementation, mobility hub plans must be designed in accordance with all applicable standards, depending on the types of transit connections proposed, including the California Building Code, City of San Diego's *Street Design Manual* (PD1, PD2, PD3), and the City of Coronado *Comprehensive Active Transportation Plan and Complete Streets Strategy* and Municipal Code Section 52.08 (PD9, PD10). Final plans for the mobility hubs would be subject to the review and approval by either the City of San Diego (PD1, PD2, PD3) or the City of Coronado traffic engineer (PD9, PD10), depending on the location of the

mobility hub. Compliance with these existing requirements and planning processes would ensure impacts would be less than significant.

Future development under the proposed PMPU would result in new or expanded visitor-serving development including, but not limited to, hotels, retail shops, commercial recreational uses, marinas and associated amenities, restaurants, and parks. The construction of these future development projects could result in certain elements, such as driveways, access roads, barriers, parking lot, or other circulation-related features. However, all future development projects would be required to comply with the California Building Code, as adopted by the City of San Diego (Municipal Code Section 145.0101), the City of Imperial Beach (Municipal Code Section 15.06.010), and the City of Coronado (Municipal Code Section 70.20), which establish regulations for the safe construction and maintenance of buildings and structures. Future development projects would also have to comply with local jurisdictions regulations related to the design of public right-of-way including the City of San Diego *Street Design Manual*, City of Coronado Municipal Code Section 52.01, and City of Imperial Beach Municipal Code Section 12.04. Lastly, future development projects would also be required to comply with the Baywide Development Standards outlined in Chapter 4 of the proposed PMPU, as well as the subdistrict-specific development standards outlined in Chapters 5.1 to 5.10. The proposed PMPU development standards would establish development requirements for pathways, scenic vista areas, view corridor extensions, and structures for future development under the proposed PMPU. Compliance with these existing requirements and planning processes would ensure impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, one of three options within North Embarcadero could be selected by the Board if the proposed PMPU is approved. Each of these options would replace the water and land uses proposed within the same area of the proposed PMPU located along North Harbor Drive. Figures 3-5, 3-6, and 3-7 illustrate the locations. Impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, in compliance with existing requirements and planning processes, would result in less-than-significant impacts.

The closure of North Harbor Drive between G Street and Broadway and the development of the Waterfront Destination Park under Option 1 would be subject to review and approval by the City of San Diego's traffic engineer (for roadway and bicycle facility improvements) and/or the District (for pedestrian facility improvements) to ensure the proposed improvement would not result in hazardous design features. Furthermore, construction of these developments would comply with the California Building Code, as adopted by the City of San Diego (Municipal Code Section 145.0101), the City of San Diego *Street Design Manual*, and the Baywide Development Standards outlined in Chapter 4 of the proposed PMPU. Thus, Option 1 would result in less-than-significant impacts, and would not result in any additional or more severe impacts related to substantially increasing hazards due to a geometric design or incompatible use than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, in compliance with existing requirements and planning processes, would result in less-than-significant impacts.

Development of the expanded Lane Field Setback Park under Option 2 would be subject to review and approval by the City of San Diego's traffic engineer (for roadway and bicycle facility improvements) and/or the District (for pedestrian facility improvements) to ensure the proposed improvement would not result in hazardous design features. Furthermore, construction of these developments would comply with the California Building Code, as adopted by the City of San Diego (Municipal Code Section 145.0101), the City of San Diego *Street Design Manual*, and the Baywide Development Standards outlined in Chapter 4 of the proposed PMPU. Thus, Option 2 would result in less-than-significant impacts and would not result in any additional or more severe impacts related to substantially increasing hazards due to a geometric design or incompatible use than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, in compliance with existing requirements and planning processes, would result in less-than-significant impacts.

The realignment of North Harbor Drive to the east of its present location from Hawthorn Street to the prolongation of B Street and the development of additional park space under Option 3 would be subject to the review and approval by the City of San Diego's traffic engineer (for roadway and bicycle facility improvements) and/or the District (for pedestrian facility improvements) to ensure the proposed improvement would not result in hazardous design features. Furthermore, construction of these developments would comply with the California Building Code, as adopted by the City of San Diego (Municipal Code Section 145.0101), the City of San Diego *Street Design Manual*, and the Baywide Development Standards outlined in Chapter 4 of the proposed PMPU. Thus, Option 3 would result in less-than-significant impacts, and would not result in any additional or more severe impacts related to substantially increasing hazards due to a geometric design or incompatible use than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies listed in Section 4.14.4.3 would not result in impacts related to increased hazards due to geometric design features or incompatible uses. The proposed policies would minimize and reduce the potential for transportation-related hazards. For instance, the District will plan, design, and implement a comprehensive waterfront open space network that provides access to and throughout the public realm on Tidelands and enhances proximate connections to the water for the public and priority coastal uses (WLU Policy 3.1.2); the District will protect and, where feasible, expand waterside amenities (WLU Policy 3.1.5); and through CDPs issued by the District, permittees will plan, design, and implement improvements to the mobility network that provide opportunities for a variety of users to access the public realm (M Policy 1.1.12).

Impact Determination and Mitigation

Implementation of the proposed PMPU would not substantially increase hazards due to a geometric design feature or incompatible uses. Impacts would be less than significant, and no mitigation measures are required.

Threshold 4: Result in inadequate emergency access?

Impact Analysis

Impacts of Water and Land Uses

Construction

The proposed PMPU does not authorize construction of any specific development project, but it is reasonably foreseeable that future development projects consistent with the proposed water and land use designations, as well as the proposed policies and planning district standards, would be constructed throughout the life of the proposed PMPU until its buildout year of 2050. Construction of future development projects or transportation infrastructure improvements may require roadways to be partially or completely closed to traffic due to large equipment, material delivery, or work within the right-of-way. Road blockages could prevent emergency response vehicles from accessing existing development within the proposed PMPU planning area or surrounding areas, thereby resulting in inadequate emergency access.

If construction activities of future projects would encroach on public right-of-way within one of the adjacent cities, which could result in interference with emergency access, the project proponent must obtain a temporary encroachment and/or right-of-way permit from the appropriate jurisdiction(s) prior to commencing construction (see Section 4.14.3.3 for applicable local regulations). In the City of San Diego, Municipal Code Section 129.0702 requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects, construction projects, and other work that encroaches into the public right-of-way, including sidewalks, as well as an accompanying traffic control plan. Future development within PD1, PD2, PD3, and PD4 would be subject to this requirement. For future development in PD8, the City of Imperial Beach requires a Temporary Encroachment Permit for any work performed in any public right-of-way of the city (Municipal Code Section 12.04.020). Lastly, future development in PD9 and PD10 would be subject to City of Coronado Municipal Code Section 52.10, which requires a Right-of-Way Permit for all work on public property, such as repairs to sidewalks, curbs and gutters, driveway aprons, and parkways (the area between the sidewalk and the curb); or to place equipment in the public right-of-way, such as a crane placed in the street to transport materials to a second story. Section 52.10.060 includes specific requirements for traffic control around the work site (see Section 4.14.3.3 above for more details). In some cases, the approval of these permits requires the preparation and implementation of a traffic control plan for the management of traffic during the period in which the construction activities encroach into the right-of-way. This would also include sidewalks or bike routes if any of these facilities are affected by the encroachment. Compliance with these existing regulatory requirements would ensure that construction of future PMPU-related development would not result in inadequate emergency access. Therefore, impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, one of three options within the North Embarcadero Subdistrict could be selected by the Board, if the proposed PMPU is approved. Each of these options shows alternative project components from that of the proposed PMPU, as illustrated in Figures 3-5, 3-6, and 3-7. Construction impacts associated with each of the options are analyzed below

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU would comply with local regulations, which would ensure a less-than-significant impact related to inadequate emergency access.

If construction activities associated with the new Waterfront Destination Park under Option 1 would encroach on public right-of-way that could result in interference with emergency access, the project proponent must obtain a temporary encroachment and/or right-of-way permit from the City of San Diego prior to commencing construction (see Section 4.14.3.3 for applicable local regulations) to ensure that emergency access will be maintained. Therefore, construction associated with Option 1 would result in less-than-significant impacts, and would not result in any additional or more severe impacts associated with inadequate emergency access than buildout of PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU would comply with local regulations, which would ensure a less-than-significant impact related to inadequate emergency access.

If construction activities associated with the expanded Lane Field Setback Park under Option 2 would encroach on public right-of-way that could result in interference with emergency access, the project proponent must obtain a temporary encroachment and/or right-of-way permit from the City of San Diego prior to commencing construction (see Section 4.14.3.3 for applicable local regulations) to ensure that emergency access will be maintained. Therefore, construction associated with Option 2 would result in less-than-significant impacts, and would not result in any additional or more severe impacts associated with inadequate emergency access than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would comply with local regulations, which would ensure a less-than-significant impact related to inadequate emergency access.

If construction activities associated with the new park space that could be developed under Option 3 would encroach on public right-of-way that could result in interference with emergency access, the project proponent must obtain a temporary encroachment and/or right-of-way permit from the City of San Diego prior to commencing construction (see Section 4.14.3.3 for applicable local regulations) to ensure that emergency access will be maintained. Therefore, construction associated with Option 3 would result in less-than-significant impacts, and would not result in any additional or more severe impacts related to inadequate emergency access than buildout of the proposed PMPU without Option 3.

Operation

The proposed PMPU would allow for the development of transportation infrastructure projects in PD1, PD2, PD3, PD4, PD8, PD9, and PD10 that would physically alter the existing roadway network. Transportation infrastructure improvements may include narrowing or widening roadways; adding bike paths and/or bike lanes to road rights-of-way; and/or closing, opening, or connecting existing roadways. For example, potential improvements identified in the proposed PMPU for PD3 include the closure of Market Street between Harbor Drive and Columbia Street, which could alter existing emergency access routes. Alternatively, other potential transportation improvements proposed in PD3 include the extension of A Street to Harbor Drive, which could improve emergency access by providing a continuous connection linking Harbor Drive and Pacific Highway. In addition, mobility hubs are proposed in PD1, PD2, PD3, PD9, and PD10 to provide connections between local and regional transit and the proposed PMPU area. These improvements may alter existing circulation patterns or points of emergency vehicle access within the planning districts. Mobility hubs vary in size and function, and could include components such as parking structures, bike and pedestrian pathways, and other forms of transit connection.

In addition, future development under the proposed PMPU would result in new or expanded visitor-serving development including, but not limited to, hotels, retail shops, commercial recreational uses, marinas and associated amenities, restaurants, and parks. The construction of these future development projects could result in certain elements, such as driveways, access roads, barriers, parking lot, or other circulation-related feature, that could potentially affect emergency access. However, all future development projects that could occur under the proposed PMPU would be subject to review by the applicable city's fire department, which reviews projects for sufficient emergency access for fire trucks and other emergency vehicles. All future development projects under the proposed PMPU would also be reviewed for certain elements such as width of egress/ingress to ensure the driveways and other access points would be properly sized to allow emergency vehicle access and turn-around, if necessary. In addition, transportation infrastructure improvements, including mobility hubs, would be constructed in compliance with all applicable standards, including the California Building Code, the City of San Diego's *Street Design Manual*, and applicable requirements of the City of Coronado. Therefore, compliance with the applicable regulations and review requirements would ensure that future development under the proposed PMPU would not result in inadequate emergency access.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, one of three options within North Embarcadero could be selected by the Board if the proposed PMPU is approved. Each of these options would replace the water and land uses proposed within the same area of the proposed PMPU located along North Harbor Drive. Figures 3-5, 3-6, and 3-7 illustrate the locations. Operational impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU would comply with local regulations, which would ensure a less-than-significant impact related to inadequate emergency access.

The closure of North Harbor Drive and the operation of the new Waterfront Destination Park that could occur under Option 1 would be subject to review by the City of San Diego's Fire Department, which reviews projects for sufficient emergency access for fire trucks and other

emergency vehicles. These projects would also be reviewed to ensure the driveways and other access points would be properly sized to allow emergency vehicle access and turn-around, if necessary. Option 1 would be constructed in compliance with all applicable standards, including the California Building Code and the City of San Diego's *Street Design Manual*. Therefore, compliance with the applicable regulations and review requirements would ensure implementation of Option 1 would not result in inadequate emergency access, and would not result in any additional or more severe impacts related to inadequate emergency access than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU would comply with local regulations, which would ensure a less-than-significant impact related to inadequate emergency access.

The expansion of Lane Field Setback Park that could occur under Option 2 would be subject to review by the City of San Diego Fire Department, which reviews projects for sufficient emergency access for fire trucks and other emergency vehicles, and would be reviewed to ensure the driveways and other access points would be properly sized to allow emergency vehicle access and turn-around, if necessary. In addition, Option 2 would be constructed in compliance with all applicable standards, including the California Building Code and the City of San Diego's *Street Design Manual*. Therefore, compliance with the applicable regulations and review requirements would ensure implementation of Option 2 would not result in inadequate emergency access, and would not result in any additional or more severe impacts related to inadequate emergency access than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU would comply with local regulations, which would ensure a less-than-significant impact related to inadequate emergency access.

The realignment of North Harbor Drive and development of a new park space that could occur under Option 3 would be subject to review by the City of San Diego Fire Department, which reviews projects for sufficient emergency access for fire trucks and other emergency vehicles and would also be reviewed to ensure the driveways and other access points would be properly sized to allow emergency vehicle access and turn-around, if necessary. In addition, Option 3 would be constructed in compliance with all applicable standards, including the California Building Code and the City of San Diego's *Street Design Manual*. Therefore, compliance with the applicable regulations and review requirements would ensure implementation of Option 3 would not result in inadequate emergency access and would not result in any additional or more severe impacts associated in inadequate emergency access than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies listed in Section 4.14.4.3 would not result in impacts related to inadequate emergency access. The proposed policies would minimize and reduce the potential for impacts related to adequate emergency access. For instance, the District will coordinate with agencies that have transportation authority and with adjacent jurisdictions and permittees, to plan shared mobility infrastructure in support of the safe movement of people and/or goods (M Policy 1.1.8); the District will engage with the U.S. military, local, regional, and State

agencies with transportation authority to identify and document the transportation facilities located on Tidelands that either are part of the STRAHNET or provide a critical connection to strategic facilities located on or adjacent to Tidelands, ensure that the critical components of the District's transportation network are available and maintained to meet the goals and standards of the STRAHNET, and ensure that the identified critical transportation facilities located on Tidelands are clear of permanent obstructions that would prohibit or slow the movement of military use when needed for Department of Defense activities (M Policy 3.1.1); the District will engage with the U.S. military to identify and ensure the effectiveness of critical assets for military use, such as marine terminals, rail facilities, and docks and piers, that may be needed in times of emergency while allowing day-to-day access to strategic assets (M Policy 3.2.1); the District will plan and maintain its transportation network so that it has the capacity to evacuate operations located on terminals in a manner and timeframe consistent with the U.S. military's needs (M Policy 3.2.2); and the District will coordinate with regional transportation agencies to design shared infrastructure that meets emergency needs, including evacuation, such as evacuation for post-seismic events and tsunamis (SR Policy 1.1.3).

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result in inadequate emergency access. Impacts would be less than significant, and no mitigation is required.

4.14.5 Cumulative Impact Analysis

A significant cumulative impact on transportation, circulation, and mobility would occur if the future development allowed under the proposed PMPU were to make a cumulatively considerable contribution to a conflict with an applicable program, plan, ordinance, or policy addressing the circulation system; conflict with or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b); substantially increase hazards due to a geometric design feature or incompatible uses; or result in inadequate emergency access. These issues are evaluated within the context of past, present, and probable future projects.

A significant cumulative impact would generally occur if a proposed development project, when combined with past, present, or probable future plans or projects, would conflict with an applicable program, plan, ordinance, or policy addressing the circulation system. For this analysis, these programs, plans, ordinances, or policies are described in Section 4.14.3, *Laws, Regulations, Plans, and Policies*.

Based on the changes to the State CEQA Guidelines initiated by the passage of SB 743, a project's impact on transportation is measured by the number of VMT that would be generated. As discussed under OPR's Technical Advisory, "metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa" (OPR 2018:6). Consequently, please see the analysis above for discussion of combined project specific and cumulative analysis. Therefore, the methodology for determining a project's

contribution to the cumulative VMT impact is the same as that for direct VMT impacts (see Section 4.14.4.2, *Thresholds of Significance*). Consistent with the methodology in Section 4.14.4.1, a significant cumulative impact associated with a conflict or inconsistency with State CEQA Guidelines Section 15064.3, subdivision (b) (induced VMT) would occur if future development allowed under the proposed PMPU would not be able to achieve a 15 percent reduction in per employee VMT below the 2050 Regional Average, or would result in an increase in total planning district VMT, depending on the land use type. Failure to meet these thresholds would result in a cumulative impact due to the resulting secondary impacts on the physical environment associated with VMT, including GHG emissions and decreased air quality.

A significant cumulative transportation, circulation, and mobility impact would occur if the proposed PMPU, when combined with past, present, and probable future projects, would substantially increase hazards from geometric design features (e.g., sharp roadway angles or short site distances) or incompatible uses (e.g., tall buildings that encroach into nearby airport airspace).

Finally, a significant cumulative transportation, circulation, and mobility impact would occur if the proposed PMPU, when combined with past, present, and probable future projects, would result in inadequate emergency access that could affect emergency response to a certain project area.

4.14.5.1 Geographic Scope

The geographic scope of analysis for cumulative impacts related to VMT includes the San Diego Region, based on the OPR Technical Advisory. The geographic scope for the analysis of the impacts related to a program, plan, ordinance, or policy addressing the circulation system, substantially increasing hazards due to geometric features or incompatible uses, and inadequate emergency access, would be different than the geographic scope for the VMT analysis, which would include all past, present, and probable future projects that would have the potential to affect the same transit, roadway, bicycle, and pedestrian facilities within the proposed PMPU area and the interconnected circulation system of the adjacent cities.

4.14.5.2 Cumulative Effects of Past, Present, and Probable Future Projects

Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System

A significant cumulative impact on roadway, pedestrian, bicycle, and transit facilities would generally occur if past, present, and probable future projects would conflict with an applicable program, plan, ordinance, or policy addressing these transportation facilities. Past projects such as general plans and community plans, for which the complete buildout covers many years, have been required to demonstrate consistency with all applicable programs, plans, ordinances, or policies addressing the circulation system at the time of their adoption. It should be noted that past projects were analyzed by evaluating the project's potential impact on roadway congestion, or level of service, until July 1, 2020, when State CEQA Guidelines Section 15064.3 went into effect, which established VMT as the appropriate methodology for transportation analysis. Therefore, projects after July 1, 2020 are analyzed using VMT methodology. Present and probable future projects would also be required to demonstrate consistency with applicable programs, plans, ordinances, and policies addressing the transportation facilities within its project boundaries. However, it is possible

the past, present or probable future projects would propose a component that would be inconsistent with a policy or plan addressing the circulation system, such as the removal of a bikeway, that could result in an impact. Because plans and policies are not enforced in the same way laws or ordinances adopted by cities and jurisdictions are enforced, a conflict with a plan or policy could occur as part of a future project, and would result in a significant impact. Therefore, cumulative effects from past, present, and probable future projects would be significant.

Conflict or Be Inconsistent with State CEQA Guidelines Section 15064.3, Subdivision (b)

Past, present, and probable future projects have been described in Table 2-2 in Chapter 2, *Environmental Setting*. The VMT analysis is cumulative in nature. Past projects would have been approved prior to the passage of SB 743, and therefore would not have been required to analyze and mitigate for VMT-related impacts. Cumulative present and probable future projects would be required to comply with SB 743. Although compliance is required, it is not guaranteed each present and probable future project would be able to make a less-than-significant impact determination regarding a 15 percent reduction below regional average VMT. Mitigation may reduce VMT for a project, but still may not reduce potential impacts to a less-than-significant level. Projects that cannot reach the VMT reduction goal of 15 percent below the regional average would contribute to increased VMT in the region, which would contribute to the prevention of the region reaching the established GHG reduction targets. Therefore, cumulative projects in the region could result in significant cumulative impacts related to a conflict or inconsistency with State CEQA Guidelines Section 15064.3(b).

Substantially Increase Hazards Because of a Geometric Design Feature or Incompatible Uses

Design plans for the development associated with all regionally significant plans and programs in the cumulative study area (listed in Table 2-2) would be required to undergo review and approval by the relevant city's traffic engineer (Chula Vista, Coronado, Imperial Beach, National City, or San Diego) to ensure the development would be consistent with the most recent design and safety standards. This would include adjacent cumulative projects such as the Chula Vista Bayfront Master Plan, Midway-Pacific Highway Community Plan Update, and National City Bayfront Projects and Plan Amendments. Therefore, cumulative projects would not result in a significant cumulative impact related to increased hazards due to geometric features or incompatible uses.

Result in Inadequate Emergency Access

Development of the present and probable future projects listed in Table 2-2 may result in the closure of roadway lanes and/or whole roadways during construction, due to equipment, material delivery, or construction activities occurring within the road right-of-way. Cumulative projects that are directly adjacent to the proposed PMPU area, such as the Chula Vista Bayfront Master Plan and National City Bayfront Projects and Plan Amendments, could cumulatively have the potential to interfere with the same roadways or road systems. However, future development that would impact the public roadways and potentially interfere with emergency access would be required to implement traffic control measures in compliance with local regulations and as part of the permitting process. As such, cumulative impacts from past, present, and probable future projects would not be significant.

4.14.5.3 Project Contribution

Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System

The proposed PMPU would not result in a cumulatively considerable contribution to a significant cumulative impact related to conflict with programs, plans, ordinances, or policies associated with the circulation system because the planned improvements and policies would not conflict with regional and local transportation plans. Additionally, policies proposed as part of the proposed PMPU would ensure the District would coordinate with regional agencies with transit authority, as well as adjacent jurisdictions for the expansion or development of transit facilities. Therefore, the proposed PMPU would not make a cumulatively considerable contribution to a significant cumulative impact.

Conflict or Be Inconsistent with State CEQA Guidelines Section 15064.3, Subdivision (b)

As noted above, VMT analysis is cumulative by nature; the significance of a potential impact is determined based on the project's individual VMT contribution to cumulative regional VMT impacts. The VMT generated by the proposed PMPU is analyzed by determining if the proposed uses would either result in employment-based VMT (e.g., hotels) that does not achieve a VMT reduction of 15 percent below the 2050 Regional Average or results in a net increase in VMT for retail, restaurant, or recreational uses. If the proposed use would not reduce employee VMT by 15 percent below the 2050 Regional Average VMT per employee, or would result in a net increase in total planning district VMT, it would result in a significant impact. Consequently, the VMT-related impacts identified above in Section 4.14.4.4, *Project Impacts and Mitigation Measures*, are naturally cumulative in nature.

The total VMT associated with buildout of PD1, PD2, PD3, PD8, PD9, and PD10 is expected to increase with the proposed PMPU. Therefore, impacts related to VMT for retail, restaurant, and recreational uses would result in a cumulatively considerable contribution to a significant cumulative impact (**Impact-C-TRA-1**).

The future buildout of the proposed water and land uses as part of the proposed PMPU includes uses that would result in increased VMT. The proposed PMPU's employment uses do not achieve a VMT reduction of 15 percent below the 2050 Regional Average significance threshold. Therefore, the increase in employment associated with the proposed PMPU would result in a cumulatively considerable contribution to a significant cumulative impact (**Impact-C-TRA-2**).

Because proposed roadway network changes in PD2 and PD3 would increase VMT and thereby induce travel, the full buildout of the proposed PMPU would result in a cumulatively considerable contribution to a significant cumulative impact related to an increase in VMT due to infrastructure improvements (**Impact-C-TRA-3**).

Substantially Increase Hazards Because of a Geometric Design Feature or Incompatible Uses

Future development associated with the proposed PMPU would be subject to review and approval of all design plans by the traffic engineer of the city in which the development would occur, similar to the process for the cumulative present and probable future cumulative projects. The review and

approval by the applicable traffic engineer would ensure the development projects would not result in unsafe geometric design features or incompatible uses that would create hazards or exacerbate existing hazards within the circulation system. Therefore, implementation of the proposed PMPU would not make a cumulatively considerable contribution to a significant cumulative impact.

Result in Inadequate Emergency Access

Future development associated with the proposed PMPU would likely result in the closure of roadway lanes during construction, due to equipment, material delivery, or construction activities occurring within the road right-of-way. Blocked roadways could prevent the access of emergency vehicles to the proposed PMPU area or surrounding vicinity. However, construction of future development under the proposed PMPU would be required to comply with existing regulatory requirements of the applicable adjacent city, which require temporary encroachment and/or right-of-way permits for any construction activities that would extend into public right-of-way. In some cases, the approval of these permits includes the preparation and implementation of a traffic control plan for the management of traffic during the period in which construction activities would encroach into the right-of-way. This would also include sidewalks or bike routes if any of these facilities are affected by the encroachment. Compliance with these existing regulatory requirements would ensure that construction of future PMPU-related development would not result in inadequate emergency access. Therefore, the proposed PMPU would not make a cumulatively considerable contribution to a significant cumulative impact related to emergency access.

4.14.5.4 Cumulative Impact Determination and Mitigation

Significant Impacts

Implementation of the proposed PMPU would result in a cumulatively considerable contribution to cumulative transportation and mobility impacts (**Impact-C-TRA-1** through **Impact-C-TRA-3**).

Mitigation Measures

For **Impact-C-TRA-1**, **Impact-C-TRA-2**, and **Impact-C-TRA-3**:

Implement **MM-TRA-1: Establish a Transportation Impact Fee Program**, as specified under Threshold 2.

Implement **MM-TRA-2: Contribute Fair Share Impact Fees**, as specified under Threshold 2.

Implement **MM-TRA-3: Implement a Transportation Demand Management Plan**, as under specified Threshold 2.

Level of Significance After Mitigation

Because the location and timing of the future development of the proposed PMPU buildout is unknown at the time of this analysis, and the timing and location of VMT-reducing transportation infrastructure improvements that would be funded by **MM-TRA-1** and **MM-TRA-2** are also unknown, the potential reduction of the significance of the impact cannot be determined. Implementation of a TDM Plan (**MM-TRA-3**) would also provide incentives to use alternative modes of transportation instead of individual vehicles, which would reduce VMT induced by development projects and improvements to transportation infrastructure. However, it is not possible to quantify

the effectiveness of the recommended mitigation measures because the location, timing, and design of new development allowed under the proposed PMPU is unknown at this time. Therefore, the project would result in a cumulatively considerable contribution to the significant cumulative VMT-related impact. **Impact-C-TRA-1**, **Impact-C-TRA-2**, and **Impact-C-TRA-3** would be cumulatively considerable and unavoidable.

4.15.1 Overview

This section describes the existing utility systems that serve the proposed Port Master Plan Update (PMPU) area, as well as the regulations that govern their use, supply, distribution, and performance. This section also discusses the proposed PMPU’s potential to exceed the existing or planned infrastructure and treatment capacities for utilities and service systems.

Impacts on utilities and service systems would be significant if the proposed PMPU were to (1) require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; (2) have insufficient water supplies available to serve the proposed PMPU and reasonably foreseeable future development during normal, dry and multiple dry years; (3) result in a determination by the wastewater treatment provider which serves or may serve the PMPU area that it does not have adequate capacity to serve the projected demand in addition to the provider’s existing commitments; (4) generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; and (5) not comply with Federal, state, and local management and reduction statutes and regulations related to solid waste. Potential impacts associated with energy use are addressed in Section 4.6, *Greenhouse Gas Emissions and Energy*.

Table 4.15-1. Summary of Significant Utilities and Service Systems Impacts and Mitigation Measures

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-UTIL-1: Utility-Related Land Disturbance	All planning districts	MM-BIO-2, MM-BIO-5, MM-BIO-8, and MM-BIO-9 , as described in Section 4.3, <i>Biological Resources</i> MM-CUL-1 through MM-CUL-3 , as described in Section 4.4, <i>Cultural Resources and Tribal Cultural Resources</i> MM-GEO-1 , as described in Section	Significant and Unavoidable	Mitigation measures would not reduce all ground-disturbing impacts to a level below significance, including impacts on cultural resources and water quality; therefore, Impact-UTIL-1 would be significant and unavoidable.

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
		<p>4.5, <i>Geology and Soils</i> MM-HAZ-1 and MM-HAZ-2, as described in Section 4.7, <i>Hazards and Hazardous Materials</i> MM-WQ-1 through MM-WQ-7, as described in Section 4.8, <i>Hydrology and Water Quality</i>.</p>		
<p>Impact-UTIL-2: Insufficient Water Supplies Available to Serve the proposed PMPU During Operation of Future Development</p>	<p>All planning districts</p>	<p>MM-UTIL-1: Update the UWMP with New Growth Projections MM-UTIL-2: Prepare a Water Demand Analysis to Determine if Sufficient Water Supplies are Available MM-UTIL-3: Implement Water Conservation Measures</p>	<p>Less than Significant</p>	<p>MM-UTIL-1 would ensure that future growth occurring under the proposed PMPU is accounted for in the next UWMP updates; MM-UTIL-2 would ensure adequate water supplies are available prior to site-specific development; MM-UTIL-3 would require implementation of water-efficient design measures</p>
<p>Impact-C-UTIL-1: Potential to Result in a Cumulatively Considerable Adverse Impact Related to the Requirement for New or Expanded Utilities</p>	<p>All planning districts</p>	<p>MM-BIO-2, MM-BIO-5, MM-BIO-8, and MM-BIO-9 MM-CUL-1 through MM-CUL-3 MM-GEO-1 MM-HAZ-1 and MM-HAZ-2 MM-WQ-1 through MM-WQ-7</p>	<p>Significant and Unavoidable</p>	<p>Mitigation measures would not reduce all ground-disturbing impacts to a level below significance, including impacts on cultural resources and water quality; therefore, this impact would be significant and unavoidable.</p>
<p>Impact-C-UTIL-2: Potential to Result in Cumulatively Considerable Insufficient Water Supplies During Operation</p>	<p>All planning districts</p>	<p>MM-UTIL-1, MM-UTIL-2, and MM-UTIL-3</p>	<p>Less than Significant</p>	<p>MM-UTIL-1 would ensure that future growth occurring under the proposed PMPU is accounted for in the next UWMP updates, and MM-UTIL-2 would ensure adequate water supplies are available prior to site-specific</p>

Summary of Significant Impact(s)	Applicable Planning District(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
<p>Impact-C-UTIL-3: Potential to Result in Cumulatively Considerable Adverse Impacts Related to Exceeding Capacity at Existing Landfills During Construction</p>	<p>All planning districts</p>	<p>MM-C-UTIL-1: Update the Five-Year Review Report with New Growth Projections MM-C-UTIL-2: Conduct Site-Specific Environmental Review to Assess Landfill Capacity and Implement Measures to Reduce Solid Waste</p>	<p>Less than Significant</p>	<p>development. MM-UTIL-3 would require water conservation measures for future development. MM-C-UTIL-1 would ensure that future growth occurring under the proposed PMPU is accounted for in the next Five-Year Review Report updates, which would ensure that growth occurring under the proposed PMPU is accounted for in landfill capacity planning; in the interim, MM-C-UTIL-2 requires that adequate landfill capacity exist before the District approves site-specific development, which would reduce impacts to less than significant.</p>
<p>Impact-C-UTIL-4: Potential to Result in Cumulatively Considerable Adverse Impacts Related to Exceeding Capacity at Existing Landfills During Operation</p>	<p>All planning districts</p>	<p>MM-C-UTIL-1 and MM-C-UTIL-2</p>	<p>Less than Significant</p>	<p>MM-C-UTIL-1 would ensure that future growth occurring under the proposed PMPU is accounted for in the next Five-Year Review Report updates, which would ensure that growth occurring under the proposed PMPU is accounted for in landfill capacity planning; in the interim, MM-C-UTIL-2 requires that adequate landfill capacity exist before the District approves site-specific development, which would reduce impacts to less than significant.</p>

4.15.2 Existing Conditions

The utility providers that service the proposed PMPU area are listed in Table 4.15-2. Each utility provider and information about the utilities provided is described in further detail below.

Table 4.15-2. Utility Service Providers

Utility Service	Provider ¹
Wastewater	Metropolitan Sewerage System (City of San Diego Public Utilities Department)
Water	City of San Diego Public Utilities Department; Sweetwater Authority; California-American Water Company
Stormwater	San Diego Unified Port District; City of San Diego Storm Water Department; City of Imperial Beach Stormwater Department; City of Coronado Stormwater Department
Solid Waste	Various Franchise Waste Haulers ² / Miramar, Sycamore, Otay, and Borrego Landfills
Electricity and Natural Gas	San Diego Gas and Electric (SDG&E)
Telecommunications	Various Providers, such as AT&T, T-Mobile, Verizon, Sprint, etc.

¹ Utility providers listed here are limited to the proposed PMPU area, which does not include PD5, PD6, and a portion of PD7 (Pond 20).

² A list of current franchise waste haulers as of the time of this PEIR's preparation is available on the City of San Diego's website: <https://www.sandiego.gov/sites/default/files/esd-franchised-hauler-list.pdf>.

4.15.2.1 Wastewater

The Cities of Coronado, Imperial Beach, and San Diego all operate and maintain the sanitary sewer systems within their respective jurisdictions. However, the Metropolitan Sewerage System, which is owned and operated by the City of San Diego's Public Utilities Department's (PUD) Wastewater Branch, provides wastewater treatment service to all of the planning districts (PDs). The Metropolitan Sewerage System serves the City of San Diego's water customers as well as 12 cities and agencies with a service area of approximately 450 square miles and service population of approximately 2.2 million (PUD 2021). The Metropolitan Wastewater Joint Powers Authority (JPA) serves as an advisory body on the operation of the Metropolitan Sewerage System. Joint Powers Authority member agencies include the cities of Chula Vista, Coronado, Del Mar, El Cajon, Imperial Beach, La Mesa, National City and Poway; the Lemon Grove Sanitation District; the Padre Dam Municipal and Otay Water Districts; and the County of San Diego (on behalf of the Winter Gardens Sewer Maintenance District, and the Alpine, Lakeside and Spring Valley Sanitation Districts). Collectively, the wastewater collection and treatment system is known as the Metropolitan Sewerage System.

The Metropolitan Sewerage System collects, treats, and disposes of approximately 552 acre-feet per day (180 million gallons per day [mgd]) of wastewater and has existing wastewater treatment capacity to handle 285 mgd (PUD 2020).

Three treatment plants treat wastewater generated in the Metro System, including the North City Water Reclamation Plant (NCWRP), South Bay Water Reclamation Plant (SBWRP), and the Point Loma Wastewater Treatment Plant (PLWTP). The total measured wastewater collected from the

wastewater service area in 2020 was 189,531 acre-feet per year (AFY) (61,758 mgd), (PUD 2020). The PLWTP and SBWRP both treat the wastewater generated within the proposed PMPU area with the wastewater discharge being regulated by National Pollutant Discharge Elimination System (NPDES) Permit No. CA0107409.

NCWRP has a 30 mgd capacity (33,627 AFY) and in 2020 the measured wastewater flows collected were 18,208 AFY. Secondary treated water that is not recycled is discharged to the sewer system, where it is mixed with untreated flows and conveyed to PLWTP for treatment and discharge. Solids are conveyed to the City of San Diego's Metropolitan Biosolids Center for further treatment. Approximately 80 percent of the 2020 recycled water produced, or 8,300 AFY, was used within the water service area. The remainder of the recycled water was sold to other agencies.

The PLWTP facility, which provides wastewater treatment for PD1, PD2, PD3, PD4, PD9 and PD10, is located on top of the bluffs at the end of Point Loma. The PLWTP has a daily treatment capacity of approximately 737 acre-feet per day (240 mgd) and a daily peak wet weather capacity of approximately 1,326 acre-feet per day (432 mgd), and treats approximately 537 acre-feet per day (175 mgd) of wastewater. In 2020, the measured wastewater collected was 164,000 AFY (PUD 2020). Wastewater at the PLWTP is treated to an advanced primary level, at which point it is discharged into the Pacific Ocean through a 4.5-mile-long ocean outfall.

The SBWRP, which treats wastewater for PD7 and PD8, is within the Tijuana River Valley near the international border and primarily serves areas close to the SBWRP and the Otay Water District. The SBWRP's total treatment capacity is 17,000 AFY (15 mgd). In 2020, the measured wastewater flows collected were 7,323 AFY. Secondary treated wastewater is discharged to the 3.5-mile South Bay Ocean Outfall, while solids are conveyed to the PLWTP for treatment.

4.15.2.2 Water Supply

There are three main water purveyors that serve the proposed PMPU area: the San Diego County Water Authority, City of San Diego Public Utilities Department, and Sweetwater Authority. Each water supplier prepares a distinct Urban Water Management Plan (UWMP). The UWMPs discussed below were prepared in 2015 or 2020, or are in the process of being updated. The information below primarily summarizes information from the adopted 2015 and 2020 UWMPs.

On May 10, 2021, the Governor of California declared a state of emergency related to drought conditions in California. As outlined in Section 4.15.3, *Laws, Regulations, Plans, and Policies*, below, this initiated temporary drought contingency measures for water suppliers and public agencies (State of California 2021).

San Diego County Water Authority

The following information is summarized from the San Diego County Water Authority's (Water Authority) 2015 and 2020 UWMPs (the 2020 UWMP was approved on June 24, 2021), which are incorporated herein by reference. The 2015 and 2020 UWMPs provide more detailed discussion of Water Sources and Supplies, Water Quality, Reliability Planning, Conservation Measures,

Contingency Planning, and Water Recycling.¹ SDCWA also maintains a Water Shortage and Drought Response Plan (update approved on June 24, 2021) and Drought Response Ordinance for adoption by local agencies.² This drought response ordinance includes use of non-potable water for construction purposes, including dust suppression.

The Water Authority was established to supply imported water to San Diego County for wholesale distribution to its member agencies. The Water Authority is now the predominant water provider in the county and supplies 75 to 95 percent of the region's water. The Water Authority's service area serves approximately 3.3 million people in 2020, which is projected to increase to roughly 3.8 million people by 2045. The County of San Diego is expected to develop an additional 130,000 acres between 2020 and 2050, with the majority (125,000 acres) of development dedicated to residential land uses. These regional growth projections are based on the latest San Diego Association of Governments (SANDAG) Regional Growth Forecasts. The Water Authority's 24 member agencies purchase water for retail distribution within their respective service areas. Imported water supplies consist of water purchases from the Metropolitan Water District (MWD), core water transfers from the Imperial Irrigation District and canal lining projects, and as-needed spot water transfers to offset reduced supplies from MWD. These imported water supplies are delivered to the member agencies through a system of large-diameter pipelines, pumping stations, and reservoirs. The SDCWA also relies on desalinated ocean water produced at the Carlsbad Desalination Plant, which is in commercial operation and is capable of producing up to 56,000 AFY.

The Water Authority classifies water demand within its service area into two categories: (1) Municipal and Industrial (M&I) and (2) Agricultural. The M&I classification includes residential demand and water used for commercial, industrial, and institutional purposes. The Water Authority utilizes an econometric model to develop its long-range M&I demand forecasts, which is based on the U.S. Army Corps of Engineers' Municipal and Industrial Needs model and the SANDAG official growth forecasts. Agricultural demand projections are based on coordination between the Water Authority, its member agencies, SANDAG, County of San Diego Agricultural Weights and Measures, and the California Avocado Commission.

The Water Authority's 2020 UWMP includes water use associated with accelerated forecasted growth in residential housing development, which was identified in SANDAG's 2050 Regional Growth Forecast and based on adopted general plans of local jurisdictions. It should be noted that because the proposed PMPU was not an adopted plan at the time the water demand forecasts were developed, water demand associated with the proposed PMPU was not accounted for in the 2020 UWMP. Table 4.15-3 shows the Water Authority's existing and projected water demand and estimated supply between 2025 and 2045 under normal and dry year weather conditions. Water supply values account for both Water Authority and member agency supplies, as well as projected supplies from MWD necessary to meet the projected demand.

¹ SDCWA's 2015 UWMP is available at: <https://www.sdcwa.org/wp-content/uploads/2020/12/UWMP2015.pdf>; SDCWA's 2020 UWMP is available at: <https://www.sdcwa.org/wp-content/uploads/2021/06/SDCWA-2020-UWMP.pdf>.

² The SDCWA Water Shortage and Drought Response Plan is available at: <https://www.sdcwa.org/wp-content/uploads/2021/03/SDCWA-WSCP-05272021.pdf>. The SDCWA Drought Ordinance is available at: https://www.sdcwa.org/wp-content/uploads/2020/12/droughtordinance_03272008.pdf.

Table 4.15-3. SDCWA Normal, Single-, and Multiple-Dry Year Water Supply and Demand (2020–2045) (AFY)

	2025	2030	2035	2040	2045
Normal Year					
Supply	555,758	578,244	598,474	614,235	630,771
Demand	555,758	578,244	598,474	614,235	630,771
Difference	0	0	0	0	0
Single-Year Dry					
Supply ²	791,422	815,574	875,491	876,054	876,601
Demand	596,965	618,879	639,310	655,054	671,320
Difference	194,457	196,695	236,181	221,000	205,281
Multiple-Year Dry (First Year)					
Supply	818,340	791,468	771,887	748,658	765,519
Demand	580,626	586,432	592,296	598,219	604,201
Difference	237,714	205,036	179,591	150,439	161,318
Multiple-Year Dry (Second Year)					
Supply	877,285	847,729	828,858	806,339	789,676
Demand	602,935	608,964	615,054	621,204	627,416
Difference	274,350	238,765	213,804	185,135	162,260
Multiple-Year Dry (Third Year)					
Supply	880,590	850,313	830,755	807,549	849,559
Demand	625,067	631,318	637,631	644,008	650,448
Difference	255,523	218,995	193,124	163,541	199,111
Multiple-Year Dry (Fourth Year)					
Supply	940,508	910,199	890,642	867,437	850,088
Demand	645,703	652,160	658,681	665,268	671,921
Difference	294,805	258,039	231,961	202,169	178,167
Multiple-Year Dry (Fifth Year)					
Supply	941,068	910,721	891,161	867,953	850,601
Demand	661,605	668,221	674,903	681,652	688,469
Difference	279,463	242,500	216,258	186,301	162,132

Source: Water Authority 2020, Tables 9-1 through 9-7.

¹ The demand accounts for water efficiency savings.

² Includes total projected core supplies with utilization of carryover storage supplies.

As shown in Table 4.15-3, if MWD, Water Authority, and member agency supplies are maintained, and water conservation measures are implemented, no shortages are anticipated through 2045 in a normal year or in single-year and multiple-year dry scenarios. In single- and multiple-year dry scenarios, additional regional shortage management measures, consistent with the Water Authority's Water Shortage and Drought Response Plan, would require conservation measures (Water Authority 2020). By 2045, the Water Authority's total normal water demands are projected to reach 630,771 AFY (including future conservation, demand associated with projected near-term annexations, and accelerated forecasted growth), which represents a 36 percent increase from the fiscal year 2020 demand.

City of San Diego Public Utilities Department

The PUD serves more than 1.39 million people, delivering more than 156 mgd or 175,000 AFY of water throughout an approximately 404-square-mile service area (PUD 2020). For the proposed PMPU area, the City of San Diego PUD's Water Branch provides direct water service to planning districts within the City of San Diego, including PD1, PD2, PD3, and PD4. Additionally, the City of San Diego sells wholesale treated water to California American Water Company (Cal-Am), which provides water to the cities of Coronado (PD9 and PD10) and Imperial Beach (PD8), as well as a small portion of residents within the South Bay (PD7).

The City of San Diego's water system is made up of nine reservoirs that capture runoff from rainfall within local water sheds, three water treatment plants, and a small supply of local groundwater. To offset potable water demands, PUD owns and operates two water reclamation plants and a recycled water distribution system that delivers recycled water for non-potable water uses. In addition, the PUD maintains and operates more than 3,000 miles of water lines, 49 water pump stations, approximately 131 hydraulic pressure zones, and more than 200 mgd of potable water storage capacity in 29 elevated tanks, and concrete and steel reservoirs (PUD 2020). The City of San Diego's nine reservoirs have a combined capacity of 549,007 acre-feet. The City of San Diego relies heavily on purchased water from the Water Authority. From 2016 to 2020, imported water represented 89 percent of the City of San Diego's overall water (PUD 2020).

Future water demand and supply projections are required to be updated every 5 years with the adoption of a UWMP. The City of San Diego recently updated its UWMP to project water supply and demand through 2045. The 2020 UWMP was released for public review in March 2021, and was adopted at a public hearing of the City Council during one of its regularly scheduled public hearings on May 18, 2021. The City's 2020 UWMP is hereby incorporated by reference.³ Total retail area consumptive water demands decreased by 13 percent between 2015 and 2020, reflecting the City's conservation efforts as well as the more recent changes from the COVID-19 pandemic beginning March 2020. The 2020 UWMP projects that water demand for 2035 will be 217,156 AFY as opposed to the 273,748 AFY projected in the 2015 UWMP (PUD 2020). Estimated demand for 2045 will be 228,065 AFY. As noted, because the proposed PMPU was not an adopted plan at the time the water demand forecasts were developed, water demand associated with the proposed PMPU was not accounted for in the 2020 UWMP.

The City of San Diego's 2020 UWMP projects the estimated demand of potable water resources until the year 2045 based on coordination with various agencies, including the Water Authority, which provided imported water availability and regional water demands and conservation, and SANDAG, which provided the most recent SANDAG demographic projections for the City of San Diego. Table 4.15-4 shows the City of San Diego's existing and projected water demand and estimated supply between 2025 and 2045 under normal and dry year weather conditions. As shown, it is anticipated that future demand would be met by the supply in each 5-year increment through 2045. These water supply and demand projections are reevaluated for the reasonably foreseeable future (i.e., 20-year planning period) as part of the UWMP update process. In addition, the City's UWMP notes that reliance on water purchased from the SDCWA is anticipated to be significantly reduced with completion of the Pure Water project, which will become a source of drought-proof recycled water

³ SDCWA 2020 UWMP is available at: [Urban Water Management Plan \(sdcwa.org\)](https://www.sandiego.gov/sites/default/files/city_of_san_diego_2020_uwmp_final_6_29_2021_send.pdf) The City of San Diego's 2020 UWMP is available at: https://www.sandiego.gov/sites/default/files/city_of_san_diego_2020_uwmp_final_6_29_2021_send.pdf

through an advanced water purification technology. As discussed in the UWMP, “the Pure Water San Diego Program is a 20-year (2015–2035) multi-phased water and wastewater capital improvement initiative that is expected to create 83 mgd of locally controlled water upon full implementation in 2035. The...Program will divert treated water from the PLWTP ocean outfall and recycle a valuable and limited resource that is currently discharged to the ocean. Phase 1 is expected to be online by March 2025. Production is expected to be a staged ramp-up in flow with 30 mgd produced by the end of Calendar Year (CY) 2025. This will allow the City to reduce the amount of water it purchases in FY 2025 and beyond.”

The SDCWA 2020 UWMP identifies a significant projected increase in potable reuse as a result of Pure Water San Diego, Pure Water Oceanside, and the East County Advanced Water Purification Program. In 2020, the City of Oceanside began construction to expand its existing recycled water system and develop an advanced water purification project. Pure Water Oceanside will purify recycled water from the San Luis Rey Water Reclamation Facility through advanced treatment to create a new local and high-quality drinking water for the City, which will provide more than 30 percent of the City of Oceanside’s water supply. The East County Advanced Water Purification Program is a multi-phased surface water augmentation project that will purify East San Diego County’s recycled water to produce a new local and sustainable drinking water supply. It is scheduled to begin distributing water in 2025 and is expected to meet 30 percent of East County’s current drinking water demands. Additionally, the City of Escondido’s Advanced Water Treatment for Agriculture project, funded under Proposition 84, will construct a new microfiltration/reverse osmosis advanced treatment facility with a total production capacity of 3,280 AFY upon completion in 2021. Water treated at the microfiltration/reverse osmosis facility will be blended with tertiary treated water from an existing recycled water plant and distributed to agricultural customers in the northern and eastern areas of Escondido. The City of Escondido and Marine Corps Base Camp Pendleton have identified additional planned projects that are projected to yield an additional 4,300 AFY by 2025.

Table 4.15-4. City of San Diego PUD Normal, Single-, and Multiple-Dry Year Water Supply and Demand (2025–2045) (AFY)

	2025	2030	2035	2040	2045
Normal Year					
Supply	202,865	210,547	217,156	223,598	228,065
Demand	202,865	210,547	217,156	223,598	228,065
Difference	0	0	0	0	0
Single-Year Dry					
Supply	210,169	218,128	224,973	231,648	236,274
Demand	210,169	218,128	224,973	231,648	236,274
Difference	0	0	0	0	0
Multiple-Year Dry (First Year)					
Supply	202,865	210,547	217,156	223,598	228,065
Demand	202,865	210,547	217,156	223,598	228,065
Difference	0	0	0	0	0
Multiple-Year Dry (Second Year)					
Supply	210,169	218,128	224,973	231,648	236,274

	2025	2030	2035	2040	2045
Demand	210,169	218,128	224,973	231,648	236,274
Difference	0	0	0	0	0
Multiple-Year Dry (Third Year)					
Supply	210,169	218,128	224,973	231,648	236,274
Demand	210,169	218,128	224,973	231,648	236,274
Difference	0	0	0	0	0
Multiple-Year Dry (Fourth Year)					
Supply	207,735	215,601	222,367	228,964	233,538
Demand	207,735	215,601	222,367	228,964	233,538
Difference	0	0	0	0	0
Multiple-Year Dry (Fifth Year)					
Supply	207,735	215,601	222,367	228,964	233,538
Demand	207,735	215,601	222,367	228,964	233,538
Difference	0	0	0	0	0

Source: PUD 2020, Tables 6-1, 6-2, and 6-3.

Sweetwater Authority

Sweetwater Authority's (Sweetwater) water system provides water service to the cities of Chula Vista and National City, as well as the unincorporated community of Bonita within San Diego County. Sweetwater serves approximately 188,000 people, and has a service area covering 36.5 miles with approximately 33,000 service connections (Sweetwater Authority 2016). Within the proposed PMPU area, Sweetwater provides water to a portion of PD7. Sweetwater obtains its water supply through agreements with the Water Authority and the Richard A. Reynolds Desalination Facility, as well as through appropriated sources such as surface runoff from the Sweetwater River watershed and the National City well field. In addition, Sweetwater's system has emergency water connections with Otay Water District, the City of San Diego, and Cal-Am.

Sweetwater owns and operates two surface water reservoirs within the Sweetwater River watershed: Loveland Reservoir and Sweetwater Reservoir. Loveland Reservoir has an approximate capacity of 25,387 acre-feet, while Sweetwater Reservoir has an approximate capacity of 28,079 acre-feet. Sweetwater also operates the Robert A. Perdue Water Treatment Plant, which has a treatment capacity of 30 mgd and is capable of treating surface runoff stored at Sweetwater Reservoir or imported raw water from the Water Authority. The plant has a 10-million-gallon reservoir that serves as clearwell storage and as the point of delivery into the distribution system. Other sources of potable water include the National City wells, which produce potable groundwater, and the Richard A. Reynolds Desalination Facility, which produces drinking water from brackish groundwater. The National City wells consist of three wells that produce approximately 2,100 acre-feet of groundwater in a normal water year. The desalination facility treats brackish groundwater using reverse osmosis technology and was originally designed to produce 4 mgd of drinking water; however, the facility was expanded in 2017 to produce 10 mgd of drinking water (Sweetwater Authority 2018). Sweetwater's water system also includes 20 storage tanks with a combined storage capacity of approximately 43.5 million gallons of treated water and 23 pump stations with a total pumping capacity of approximately 36,000 gallons per minute.

As mentioned, future water demand and supply projections are required to be updated every 5 years with the adoption of a UWMP. In April 2021, Sweetwater issued a draft 2020 UWMP (Sweetwater 2021a). As such, Table 4.15-5 shows Sweetwater’s existing and projected water demand and estimated supply between 2025 and 2045 under normal and dry year weather conditions as indicated in Sweetwater’s Draft 2020 UWMP, which is hereby incorporated by reference.⁴ As shown, it is anticipated that future demand would be met by the supply in each 5-year increment through 2045. Similar to the City of San Diego, Sweetwater’s UWMP is updated every 5 years, at which time the projected supply and demand of potable water resources is reevaluated for the reasonably foreseeable future (i.e., 20-year planning period). On June 9, 2021, the Sweetwater Board adopted a new Water Shortage Contingency Plan (WSCP), an Addendum to the 2015 UWMP, the 2020 UWMP, and an Amendment to the Drought Response Plan (Sweetwater 2021b), which are incorporated herein by reference.

Table 4.15-5. Sweetwater Authority Normal, Single-, and Multiple-Dry Year Water Supply and Demand (2025–2045) (AFY)

	2025	2030	2035	2040	2045
Normal Year					
Supply	21,104	21,581	22,057	23,031	23,659
Demand	21,104	21,581	22,057	23,031	23,659
Difference	0	0	0	0	0
Single-Year Dry					
Supply	22,581	23,092	23,601	24,643	25,315
Demand	22,581	23,092	23,601	24,643	25,315
Difference	0	0	0	0	0
Multiple-Year Dry (First Year)					
Supply	22,581	23,092	23,601	24,643	25,315
Demand	22,581	23,092	23,601	24,643	25,315
Difference	0	0	0	0	0
Multiple-Year Dry (Second Year)					
Supply	22,792	23,307	23,822	24,873	25,552
Demand	22,792	23,307	23,822	24,873	25,552
Difference	0	0	0	0	0
Multiple-Year Dry (Third Year)					
Supply	22,792	23,307	23,822	24,873	25,552
Demand	22,792	23,307	23,822	24,873	25,552
Difference	0	0	0	0	0

Source: Sweetwater Authority 2021.

⁴ Sweetwater Authority’s Draft 2020 UWMP is available at: <https://www.sweetwater.org/DocumentCenter/View/2326/2020-Urban-Water-Management-Plan-Draft>.

4.15.2.3 Storm Drainage

Stormwater within PD1, PD2, PD3, PD4, PD9, and PD10 is collected by a system of inlets that are not controlled by the San Diego Unified Port District (District), before flowing through conveyance structures and discharging into San Diego Bay via outfall structures, many of which are subject to tidal inundation. There are no developed lands within PD7, and storm drain inlets, if present, would be limited to roadway drainage associated with Silver Strand Boulevard; likely discharging as sheet flow into the Bay. Stormwater within PD8 is collected by a system of inlets before flowing through conveyance structures and discharging into the Pacific Ocean via outfall structures, which are subject to tidal inundation. Existing drainage features present within these planning districts are displayed on Figures 4.8-1 through 4.8-4 and Figures 4.8-7 and 4.8-8 of Section 4.8, *Hydrology and Water Quality*, of this Program Environmental Impact Report (PEIR).

4.15.2.4 Solid Waste

San Diego County has four active landfills that accept solid waste: Miramar, Sycamore, Otay Annex, and Borrego Springs landfills. Table 4.15-6 shows the landfills' permitted remaining capacities and estimated remaining lifespans. Remaining landfill capacities are based on design limits specific to each landfill site. Site capacity and the maximum daily permitted rate of disposal specific to each site determine the estimated closure dates.

Table 4.15-6. Active San Diego County Municipal Solid Waste Landfills

Solid Waste Facility	Permitted Remaining Capacity (cubic yards)	Maximum Permitted Capacity (cubic yards)	Estimate of Remaining Site Life
Miramar Landfill	13,327,508	97,354,735	2031
Sycamore Canyon Landfill	110,000,000	147,908,000	2054
Otay Annex Landfill	21,194,008	61,154,000	2030
Borrego Landfill	111,504	476,098	2046
Total Capacity	144,633,020	306,892,833	--

Source: San Diego County 2017.

The remaining capacity at the Miramar Landfill is approximately 13,327,508 cubic yards of solid waste, and the landfill is projected to reach full capacity in 2031. Other large municipal landfills within the county include Sycamore Canyon, with a remaining capacity of approximately 110,000,000 cubic yards; Otay Annex Landfill, with a remaining capacity of 21,194,008 cubic yards; and Borrego Landfill, with a remaining capacity of 114,504 cubic yards. Solid waste collection would be rerouted to any of these landfills once Miramar Landfill is closed.

California Assembly Bill (AB) 939 requires that local county agencies prepare and implement Integrated Waste Management Plans, which must include a Siting Element (California Legislative Information 2020). The Siting Element must include a projection of the amount of disposal capacity that will be needed to accommodate the solid waste generated within the local jurisdiction for a 15-year period. The San Diego County Integrated Waste Management Plan Countywide Summary Plan contains the Countywide Siting Element, which outlines a combination of strategies including existing, proposed, and tentative landfills or expansions, increased diversion efforts, and out-of-county transport of solid waste, to serve all jurisdictions in the county for at least 15-years of

disposal capacity (San Diego County 2005). The August 2017 Five-Year Review Report, approved by CalRecycle in 2018, updated the planning for 15 years of county-wide landfill disposal capacity (CalRecycle 2018). The Five-Year Review Report provides estimates for available landfill capacity within San Diego County for the State-mandated 15-year period, with the last permitted public landfill in the county, Sycamore Canyon Landfill, projected to close in 2054 (Las Pulgas Landfill is projected to remain open until 2059; however, this site is located in Camp Pendleton and is for military solid waste disposal only). In their Integrated Waste Management Plan Five Year Review, the County documents local disposal trends and landfill capacity, and assesses whether sufficient capacity exists to accommodate disposal for the next 15 years. Based on the disposal trends in the most recent report, the County concluded that the remaining landfill system capacity is sufficient to accommodate solid waste disposal for more than 15 years, and when other variables are considered, including planned expansions and increased permitted daily waste capacity at Sycamore Canyon, the County anticipated sufficient landfill capacity through 2052 (San Diego County 2017).

In an effort to develop and evaluate options for managing solid waste disposal needs in San Diego through the year 2045, the City of San Diego initiated the Long-Term Resource Management Options Strategic Plan (LRMOSP) in 2007. Phase II of the LRMOSP concluded that maximizing the capacity at Miramar Landfill and extending its useful life by approximately 24 additional years would provide revenue streams for the longest period of time (BAS Team 2012, City of San Diego ESD 2012). The implementation phase, Phase III of the LRMOSP, will evaluate which of the system configurations or derivative of the configurations identified within Phase II of the LRMOSP will be pursued. Most recently, the City of San Diego Solid Waste Local Enforcement Agency (LEA) requested a Solid Waste Facility Permit Revision to increase the permitted height of the existing active portion of West Miramar Landfill (WML) 238-acre Phase II from 485 feet mean sea level (MSL) to 510 feet MSL which would extend the life of the landfill by approximately 8–10 years (City of San Diego 2019).

4.15.2.5 Electricity and Natural Gas

San Diego County is served by San Diego Gas and Electric (SDG&E), which provides electricity and natural gas to over 3.6 million customers (i.e., 1.4 million accounts) in the county and portions of southern Orange County. The utility has a diverse power production portfolio, composed of a variety of renewable and non-renewable sources. In addition, in February 2019, the City of San Diego decided to pursue Community Choice Aggregation/Energy in order to achieve 100 percent renewable energy by 2035, and created a joint-powers entity with cities across the region to pool resources in creating a more efficient Community Choice program, which would allow customers a choice of electricity power (City of San Diego Sustainability Department 2021). Energy production typically varies by season and by year. Regional electricity loads also tend to be higher in the summer because the higher summer temperatures drive increased demand for air-conditioning. In contrast, natural gas loads are higher in the winter because the colder temperatures drive increased demand for natural gas heating. See Table 4.6-7 in Section 4.6 for a summary of electricity and natural gas use within SDG&E service area.

4.15.2.6 Telecommunications

Telecommunication services are those that offer voice and data services over a large area, including phone services (landlines and/or wireless services), internet (dial-up, fiber optics, broadband), television (cable, etc.), and computer networking. As defined by Federal Standard 1037C, telecommunication facilities include the following:

- Any fixed, mobile, or transportable structure, including all installed electrical and electronic wiring, cabling, and equipment and all supporting structures, such as utility, ground network, and electrical supporting structures.
- A network-provided service to users or the network operating administration; a transmission pathway and associated equipment.
- A real property entity consisting of one or more of the following: a building, a structure, a utility system, pavement, and underlying land.

Generally, telecommunication facilities are constructed and maintained by private companies within public rights-of-way or easements on private property. While the specific type of telecommunication facilities available within any given area may vary, the proposed PMPU area is currently comprehensively served by telecommunication services, including landline/wireless telephone services, internet, television, and computer networking. Generally, District tenants contract with private providers for these services and do not construct or maintain their own telecommunication facilities.

In addition, the District is in the process of developing regulations for wireless communication facilities, including standards for managing, processing, and acting upon requests for the placement and modification of wireless communication facilities on District Tidelands.

4.15.3 Laws, Regulations, Plans, and Policies

4.15.3.1 Federal

There are no Federal laws, regulations, or plans related to utilities and service systems.

4.15.3.2 State

Water

California Water Code

Sections 10610–10656 (Urban Water Management Planning Act)

In 1983, the California Legislature enacted the Urban Water Management Planning Act (UWMPA) (California Water Code Sections 10610–10656). The UWMPA states that every urban water supplier that provides water to 3,000 or more urban connections, or that provides more than 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. This effort includes the adoption of a UWMP by every urban water supplier and an update of the plan every 5 years on or before December 31 of every year ending in a five or zero. The UWMPA has been amended several times since 1983, with the most recent amendment occurring with Senate Bill (SB) 318 in 2004. With the passage of SB 610 in 2001, additional information is required to be included as part of an urban water management plan if groundwater is identified as a source of water available to the supplier. An urban water supplier is required to include in the plan a description of all water supply projects and programs that may be undertaken

to meet total projected water use. The UWMPA and SB 610 are interrelated; the UWMP is typically relied upon to meet the requirements of SB 610.

2019 California Green Building Standards Code, Title 24, Part 11, Chapter 5

Chapter 5 of the 2019 California Green Building Standards Code specifies water efficiency requirements for non-residential development. Specific requirements are provided for plumbing within the interior of non-residential buildings as well as the use of recycled water for landscaping where recycled water is available and supplied by the municipality.

The Water Conservation Act of 2009 (Senate Bill X7 7 (2009))

Requirements per State law (SB-X7 7) mandate reduction of per capita water use and agricultural water use in throughout the State by 20 percent by 2020.

State Updated Model Landscape Ordinance (Assembly Bill 1881 [2006])

The updated Model Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances. Section 142.0401 of the San Diego Municipal Code establishes landscaping standards across the City, which are implemented through the landscape standards identified in the Land Development Code. The standards require the installation of water-efficient and/or drought tolerant landscape materials for the types of projects identified in Table 142-04A of the Municipal Code.

Solid Waste

California Integrated Waste Management Act

In response to reduced landfill capacity, the State of California passed the California Integrated Waste Management Act in 1989. This legislation (generally known by the name of its enacting bill, AB 939) requires cities and counties to reduce the amount of solid waste entering existing landfills through recycling, reuse, and waste prevention efforts. The purpose of AB 939 is to “reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible.” AB 939 requires jurisdictions to utilize “integrated waste management”—a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment.

When first enacted, AB 939 required every city and county in the state to prepare a Source Reduction and Recycling Element in its Solid Waste Management Plan to identify how each jurisdiction planned to meet mandatory State waste diversion goals of 25 percent by the year 1995 and 50 percent by the year 2000. AB 939 also established the California Integrated Waste Management Board, the State agency designated to oversee, manage, and track California’s solid waste generation each year. In order to further the goals of AB 939, statewide strategies to achieve a statewide goal of diverting 75 percent of solid waste from landfills by 2020 were established with the adoption of AB 341 in May 2012. As stated in the legislative text of AB 341, it is the policy goal of the State that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter (PRC Section 41780.01(a)). The 75 percent diversion goal does not apply to individual jurisdictions or development projects (CalRecycle 2020). AB 341 also establishes the statewide mandatory commercial recycling program which requires

businesses that generate 4 cubic yards or more of commercial solid waste per week, or multi-family residential dwellings of five units or more must implement recycling practices during operation to help the State achieve the statewide diversion goal of 75 percent.

Electricity and Natural Gas

California Code of Regulations, Title 20 and Title 24(2019)

Updated every 3 years through a rigorous stakeholder process, Title 24 of the California Code of Regulations (CCR) requires California homes and businesses to meet strong energy efficiency measures, thereby lowering their energy use. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), and Part 12 (Referenced Standards Code).

New buildings constructed in California must comply with the standards contained in CCR Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards. Title 20 contains standards ranging from power plant procedures and siting to energy efficiency standards for appliances to ensuring reliable energy sources are provided and diversified through energy efficiency and renewable energy resources.

Energy Conservation Standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977. The most recent update was the 2019 Building Energy Efficiency Standards, which were adopted in May 2018 and took effect on January 1, 2020 (Part 6, Title 24). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2016 Standards improve upon the previous 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Under the 2016 Standards, residential buildings are generally 28 percent more efficient than the 2013 Standards, and nonresidential buildings are generally 5 percent more energy efficient than the 2013 Standards as a result of better windows, insulation, lighting, ventilation systems, and other features (CEC 2015). Under the 2019 Standards, nonresidential buildings will be 30 percent more energy-efficient compared to the 2016 Standards. Part 6 also provides for the installation of cool roofs in Sections 140.3(a)(1), 141.0(b)(2)(B), and 141.0(b)(3).

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24) (CalGreen) was adopted as part of the California Building Standards Code (24 CCR) and applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated in the code, throughout the state. The current version of CalGreen (2019) became effective on January 1, 2020.

Part 11 establishes voluntary standards that became mandatory in the 2010 edition of the code, including planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. In addition, Section 5.408 of CalGreen requires that a minimum of 65 percent of all

non-hazardous construction and demolition waste be recycled and/or salvaged for reuse. This specific requirement applies to non-residential construction projects.

4.15.3.3 Local

All Utilities

San Diego Unified Port District Climate Action Plan

The District adopted a Climate Action Plan (CAP) in December 2013. The CAP includes an inventory of existing (2006) and projected greenhouse gas (GHG) emissions in 2020, 2035, and 2050 and identifies the District's GHG reduction goals and measures to be implemented to support meeting the statewide reduction goals set forth in AB 32 (1990 levels by 2020), as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*. To achieve the requisite reductions, the CAP includes various reduction measures related to transportation and land use, alternative energy generation, energy conservation, waste reduction and recycling, and water conservation and recycling.

Green Port Program and Green Port Policy (BPC Policy No. 736)

The District's Board of Commissioners adopted the Green Port Policy in 2007. This policy establishes guiding principles to achieve long-term environmental, societal, and economic benefits through resource conservation, waste reduction, and pollution prevention. The policy provides the overall framework for the Green Port Program. The Green Port Program is an umbrella program designed to achieve the District's environmental sustainability goals in six key areas: water, energy, air, waste management, sustainable development, and sustainable business practices. It was established in early 2008 to achieve the objectives outlined in the District's Green Port Policy.

Policy objectives include the following.

- Minimize, to the extent practicable, environmental impacts directly attributable to operations on San Diego Bay and the tidelands.
- Strengthen the District's financial position by maximizing the long-term benefits of energy and resource conservation.
- Prevent pollution and improve personal, community, and environmental health.
- When possible, exceed applicable environmental laws, regulations, and other industry standards.
- Ensure a balance of environmental, social, and economic concerns are considered during planning, development, and operational decisions.
- Define and establish performance-driven environmental sustainability objectives, targets, and programs.
- Monitor key environmental indicators and consistently improve performance.
- Foster socially and environmentally responsible behavior through communications with employees, tenants, stakeholders, and the community.
- Collaborate with tenants to develop an integrated, measurable, Bay-wide environmental sustainability effort.

At present, the Green Port Program primarily focuses on things the District can do to be more environmentally sustainable, such as using less water and being more energy efficient in its own operations. In the future, the District will work with its tenants (businesses that lease bayfront land from the District), local environmental groups, and others around San Diego Bay to identify ways they can support the Green Port Program.

Wastewater

City of San Diego Sewer Design Guide

When planning and designing wastewater facilities, the City Wastewater Branch follows the guidance and design policies of the *Sewer Design Guide* (2004), which summarizes and outlines relevant policies, applicable codes, and engineering and operational practices and procedures necessary to establish a safe and efficient wastewater collection system. This document provides guidance for the City of San Diego to design and maintain sewer facilities such as pump stations, gravity sewers, force mains, and associated wastewater appurtenances.

City of Coronado Sewer System Management Plan

The City of Coronado's Sewer System Management Plan (SSMP) was prepared in compliance with the requirements of the State Water Resources Control Board (SWRCB), Order 2006-0003 DWQ, Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems (2009). The goal of the WDRs is to provide a consistent statewide approach for reducing Sanitary Sewer Overflows (SSOs). The City of Coronado's ultimate goals include operating and maintaining all portions of their sanitary sewer system to minimize the potential for SSOs and to quickly and effectively mitigate the impacts associated with an SSO if it were to occur so as to protect life, environment, and property while adhering to regulatory requirements. To achieve these goals, the SSMP includes methods for ensuring that adequate capacity to convey the peak wastewater flows is provided and that comprehensive procedures are established to meet all applicable regulatory notification and reporting requirements.

Water

San Diego County Water Authority's 2020 Urban Water Management Plan

The California Urban Water Management Planning Act requires that each urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually must prepare, update, and adopt a UWMP at least once every 5 years. This law applies to the San Diego County Water Authority. The intent of an UWMP is to present information on water supply, water usage, recycled water, and water use efficiency programs in a respective water district's service area. A UWMP also serves as a resource for planners and policy makers over a 25-year timeframe. The San Diego County Water Authority updates its demand forecasts and supply needs based on the most recent SANDAG forecast approximately every five years. The most current supply and demand projections are contained in the 2020 UWMP, an update to the 2015 UWMP, which was adopted on May 27, 2021, and were submitted to the State prior to July 1, 2021. The 2020 UWMP states that all future water demands will have available water supplies for the predicted service areas during a normal and single and multiple dry year scenarios through 2045.

City of San Diego's 2020 Urban Water Management Plan

The California Urban Water Management Planning Act requires that each urban water supplier providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet of water annually, must prepare, update, and adopt a UWMP at least once every five years. This law applies to the City of San Diego, which is a member agency of the San Diego County Water Authority. The City of San Diego prepared the 2020 UWMP to meet the State's requirements under the California Water Code and comply with the California Urban Water Management Planning Act. The plan provides information on the city's current and future water demands and supplies, discusses the water resources challenges that the city faces, and summarizes the major water resources initiatives that the City of San Diego has proactively taken to ensure a safe, reliable water supply for its water customers. Specifically, the 2020 UWMP details the city's water system, water demands, sources of water supplies, water conservation efforts, climate change impacts, energy intensity, water shortage contingency planning, and projected water supply reliability during normal, dry, and multiple-year drought conditions. Availability of imported water and regional water demands and conservation were coordinated with the San Diego County Water Authority, the wholesale water provider for the city. To prepare the City of San Diego's water demand forecast, coordination with SANDAG was necessary to obtain the most recent demographic projections for the city (2050 Regional Growth Forecast Update Series 14). The 2020 UWMP is an update to the 2015 UWMP. The Draft 2020 UWMP was released for public review from March 1, 2021, through April 5, 2021, and was adopted by the San Diego City Council in June 2021.

Sweetwater Authority's Draft 2020 Urban Water Management Plan

Sweetwater prepares an UWMP every 5 years and prepared a Draft 2020 UWMP to meet the State's requirements under the California Water Code and comply with the California Urban Water Management Planning Act. Sweetwater's UWMP is intended to ensure that sufficient water supplies are available to meet existing and future water demands within its service area. Preparation of the Draft 2020 UWMP involved coordination with various agencies and municipalities, including the San Diego County Water Authority, City of Chula Vista, City of National City, and the County of San Diego. Each of these jurisdictions have land use authority within Sweetwater's service area, and thus establish land use and housing growth policies that have an impact on Sweetwater's water use projections. Additionally, Sweetwater also coordinated with the City of San Diego on water supplies. On June 9, 2021, the Sweetwater Board adopted a new Water Shortage Contingency Plan (WSCP), an Addendum to the 2015 UWMP, the 2020 UWMP, and an Amendment to the Drought Response Plan.

Stormwater

Jurisdictional Runoff Management Program

Under the Municipal Stormwater Permit, each jurisdiction is required to have a Jurisdictional Runoff Management Program (JRMP), which includes a component that addresses issues related to construction activities and a component that addresses issues related to existing development, and that requires copermittees to establish adequate enforcement authority, develop education/outreach, and conduct monitoring. In addition, each co-permittee prepares and submits an annual report that describes program implementation and strategies to reduce the discharge of pollutants of concern to the Municipal Separate Storm Sewer Systems (MS4) Permit and receiving waters to the maximum extent practicable.

The District's JRMP has been developed to meet the conditions of the Municipal Stormwater Permit and to assist the District in achieving the goals identified in the Water Quality Improvement Project (WQIP). District-specific WQIP-based strategies have been incorporated into the JRMP. The JRMP's focus is on controlling stormwater discharges to the MS4, with the overall goal of achieving improvements in receiving water quality. The District has developed a list of Best Management Practices (BMPs) that are applicable to all persons, activities, and operations occurring on District Tidelands, and the JRMP utilizes District-specific jurisdictional activities and watershed-based strategies. Enforcement of the JRMP helps to prevent stormwater pollutants from entering local storm drains and, ultimately, San Diego Bay.

Jurisdictional Runoff Management Program BMP Standards

Best Management Practices Design Manual

As part of the District's JRMP, a *BMP Design Manual*⁵ was developed to provide guidelines for incorporating permanent post-construction BMPs into new and redevelopment projects. The *BMP Design Manual* identifies the required source-control and site-design BMPs to eliminate or reduce pollutants in stormwater runoff for all projects. For Priority Development Projects (PDPs), the *BMP Design Manual* also describes pollutant-control BMPs that must be incorporated into the site design and, where applicable, addresses potential hydromodification impacts from changes in flow and sediment supply. The *BMP Design Manual* is applicable for both tenant- and District-sponsored major maintenance or capital improvement projects, as required by the Municipal Stormwater Permit. Project proponents must submit a Storm Water Quality Management Plan (SWQMP) accurately describing how the project will meet source control site design and pollutant control BMP requirements. District staff provide technical review of and approve SWQMP documents and drainage design plans to ensure that pollutant control BMP requirements are met. The SWQMP is evaluated for compliance with the Municipal Stormwater Permit and with design criteria outlined in the District's *BMP Design Manual*. Once the approval process is complete, the project is able to commence and routine inspections are conducted throughout the duration of project construction.

Solid Waste

San Diego City Council Policy 900-16

Although the proposed PMPU area is within the District's jurisdiction, solid waste is collected and processed by the City of San Diego's franchised waste haulers. Consequently, City of San Diego policies would apply to the collection and processing of solid waste generated by future development associated with the proposed PMPU.

Construction waste makes up approximately 35 percent of the waste entering the Miramar Landfill. A majority of this waste comprises recyclable or reusable materials. In 2004, San Diego's Mayor and City Council enacted Council Policy 900-16, Construction & Demolition Material Recycling, expressing the City's commitment to recycling construction and demolition waste as an integral part of the City's comprehensive solid waste management strategy. The policy outlines the following principles for private industry.

⁵ The *BMP Design Manual* and appendices are available online at: <https://www.portofsandiego.org/stormwater-management>.

1. Businesses, organizations, and contractors are encouraged to facilitate as much waste diversion from landfills as possible through recycling, waste reduction, and reuse.
2. Demolition, construction, and renovation project proponents should evaluate the potential for maximizing waste diversion through recycling, waste reduction, and reuse. Diversion plans should be adequately communicated with all contractors and subcontractors.
3. Diversion goals should be 100 percent diversion of inert materials (concrete, rock, asphalt, dirt, etc.) and at least 50 percent diversion of all remaining materials by weight if mixed C&D [Construction and Demolition] recycling facilities are available, or as much as feasible through source separation of recyclable materials if a mixed C&D facility is not available.
4. Businesses, organizations, and contractors should purchase products made from recycled materials to the maximum extent possible.

City of San Diego Construction and Demolition Debris Deposit Ordinance

On July 1, 2008, the Construction and Demolition (C&D) Debris Deposit Ordinance took effect. The ordinance requires that the majority of construction, demolition, and remodeling projects requiring building, combination, and demolition permits pay a refundable C&D Debris Recycling Deposit and divert at least 65 percent of their debris by recycling, reusing, or donating usable materials. The ordinance is designed to keep construction and demolition materials out of local landfills and ensure they get recycled.

San Diego County Integrated Waste Management Plan

The San Diego County Integrated Waste Management Plan was adopted in January 2005 to meet the requirements of the California Integrated Waste Management Act (i.e., AB 939). The plan includes goals and policies as well as a summary of integrated waste management issues in San Diego County. It summarizes waste management programs that local jurisdictions are using to meet the 50 percent waste reduction mandate. It also suggests steps needed to cooperatively implement and administer specific programs regionally or countywide. The plan consists of a Countywide Siting Element, a Countywide Summary Plan, and three elements from each jurisdiction:

- Source Reduction and Recycling Element, which analyzes the local waste stream, and presents diversion programs and funding.
- Household Hazardous Waste Element, which includes programs to encourage safe management of household toxic waste and provide framework for recycling, treatment, and proper disposal.
- Non-Disposal Facility Element, which lists existing and planned facilities.

Long-Term Resource Management Options Strategic Plan

The LRMOSP is a planning process initiated by the City of San Diego in 2007 to develop and evaluate options for managing solid waste disposal needs in San Diego through the year 2045. Miramar Landfill, the City of San Diego's only landfill, is anticipated to close under current conditions and projections in 2030. The LRMOSP assesses the City of San Diego's current disposal system capabilities, projects future solid waste management demands, and presents long-term options for consideration by City staff and elected officials.

The LRMOSP is a three-phase process. Phase I consisted of a system analysis, regional demand and capacity analysis, and identification and screening of options. Phase II provides a review of the existing diversion programs and disposal system, and an update of future disposal demands; evaluates options to meet disposal demand after diversion programs; identifies potential system configurations; evaluates potential City of San Diego roles in future solid waste management systems; provides a financial analysis for maintaining the status quo or implementing various system configurations; identifies potential revenue opportunities; and provides implementation strategies for each of the five identified system configurations. Phase III will recommend a specific strategy and configuration system, including a detailed implementation plan.

4.15.4 Project Impact Analysis

4.15.4.1 Methodology

The analysis of impacts associated with utilities (wastewater, water, stormwater, solid waste, natural gas, electricity, and telecommunications) as a result of implementation of the proposed PMPU generally includes a comparison of the demand generated by buildout of the future development under the proposed PMPU against existing supply and storage capacities. A significant impact would occur if new or expanded facilities would be required as a result of the proposed PMPU's implementation. Utility use estimates are based on CalEEMod default generation rates for utilities, including water, wastewater, solid waste, natural gas, and electricity (Appendix C), which provide estimates for existing and proposed demand for water and energy use as well as wastewater and solid waste generation. Please see Section 4.6 for a detailed description of the methodology for utility demand estimates. Table 4.15-7 provides the generation rates for water, wastewater, and solid waste by land use. Increased demand on telecommunication facilities were qualitatively assessed.

Table 4.15-7. Wastewater, Water, and Solid Waste Generation Rates¹

Use	Wastewater (acre-feet per year)	Water (acre-feet per year)	Electricity (kWh) ²	Natural Gas (therm)	Solid Waste (cubic yards per year)	Unit
Hotel	0.08	0.09	18,063	151	2.0	Per room
Retail/ Restaurant	0.93	0.99	37,820	9,685	44.1	Per tsf ²
Meeting Space	0.55	0.88	15,150	321	3.4	Per tsf

Source: Appendix C.

¹ Generation rates are based on CalEEMod defaults for hotel, restaurant, and retail uses.

² tsf = thousand square feet

Any need for physical improvements to the existing infrastructure and the potential impacts from these improvements are evaluated within this section and the other applicable resource sections of this PEIR. A summary of the existing and proposed utility consumption within the proposed PMPU area for water, wastewater, and solid waste is provided in Table 4.15-8.

Table 4.15-8. Existing and Proposed Utility and Solid Waste Consumption

Utility	Existing (2016)	Demand of Proposed PMPU (net new) (2050)	Total – Existing plus PMPU (2050)
Water (acre-feet/year)	9,609	104	9,712
Wastewater (acre-feet/year)	8,774	86	8,860
Solid Waste (cubic yards/year)	81,486	1,755	83,241
Electricity (kWh/year)	333,873,577,333	88,647,100	333,962,224,433
Natural Gas (therm/year)	43,806,618	3,988,639	47,795,257

Source: Appendix C.

4.15.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining the significance of impacts associated with utilities and service systems resulting from the implementation of the proposed PMPU. The determination of whether a utilities and service systems impact would be significant is based on the professional judgment of the District as Lead Agency and is based on the evidence in the administrative record.

Impacts are considered significant if the proposed PMPU would result in any of the following:

1. Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects;
2. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
5. Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.15.4.3 Policies that May Avoid or Reduce Impacts

The following proposed PMPU policies would have the potential to avoid or reduce impacts associated with utilities and service systems, and are considered in the impact analysis that follows.

SR Policy 3.1.3 Permittees of development shall deploy renewable energy technology to improve energy reliability and economic resilience, where feasible.

SR Policy 3.1.5 The District shall continue to coordinate with Tidelands' tenants and adjacent local businesses to reduce resource consumption and promote sustainable operations.

SR Policy 3.1.6 The District shall promote the innovative use of "green" design for new or retrofitted Tidelands' buildings, structures, and facilities.

SR Policy 3.1.7 Development shall include water conservation strategies to save water and energy on-site, where feasible.

ECO Policy 1.1.8 Development shall integrate drought-tolerant species native to the San Diego County coastal zone as a part of landscaped areas.

ECON Policy 1.2.4 The District shall explore the creation of, and allow for the use of, different financing mechanisms to help fund the building of new infrastructure or improvement to existing infrastructure, including multimodal transportation facilities, water and stormwater systems, information and communication systems, and public space.

ECON Policy 2.3.2 The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions.

4.15.4.4 Project Impacts and Mitigation Measures

Threshold 1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant effects?

Impact Analysis

Impacts of Water and Land Uses

Construction

Chapter 3, *Project Description*, provides a complete list of the allowable uses within PD1, PD2, PD3, PD4, PD7, PD8, PD9, and PD10 and details the development projections that could occur in these planning districts by 2050, the planning horizon for the proposed PMPU. Construction activities for future PMPU-related development would involve the temporary use of the utilities discussed below and would be spread over the PMPU's approximately 30-year planning horizon. As such, the demand for construction-related utilities associated with future development under the proposed PMPU would be dispersed over an approximately 30-year period.

Water Facilities

Water would be required during construction of future development under the proposed PMPU for activities such as dust suppression—including during demolition—light washing of equipment and tools consistent with water quality regulations, and for drinking water for construction workers. Water usage during construction would be temporary, and it is possible that recycled water or other soil stabilizers could be used for dust suppression, equipment washing, etc. In 2020, PUD provided 8,195 AFY of non-potable recycled water within the City of San Diego and 4,232 AFY to three wholesale customers. The use of recycled water during future construction activities would reduce the quantity of potable water that would otherwise be required. SDCWA's Water Shortage and Drought Response Plan and Drought Response Ordinance includes use of non-potable water for construction purposes. Agencies in San Diego County use recycled water provided by SDCWA to

control dust at construction sites. As described in Chapter 2, *Environmental Setting*, most of the planning districts are within urbanized areas and are largely developed. Because there is little vacant land in the proposed PMPU area, the majority of future improvements associated with the proposed PMPU would occur as infill development or the redevelopment of existing uses. As such, construction demand for water would be offset by the cessation of existing uses during construction. Moreover, construction water usage would not require or result in the relocation or construction of new or expanded water facilities, as new or expanded existing water facilities are typically intended to serve permanent uses and operations rather than temporary water consumptive activities associated with construction. As such, demand for water during construction activities would not result in impacts from new or expanded water facilities, and, therefore, impacts would be less than significant.

Wastewater Facilities

As discussed under Section 4.15.2.1, *Wastewater*, the PLWTP and SBWRP currently meet the wastewater discharge requirements of NPDES Permit No. CA0107409. Wastewater treatment requirements for wastewater generated during construction of future development under the proposed PMPU would be based on all applicable State and Federal regulations and policies including the NPDES Permit, and would include limitations on effluent discharge and receiving water. In general, effluent discharge requirements include specifications for adequate disinfection treatment and limitations on radioactivity, pollutant concentrations, sediments, pH, temperature, and toxicity.

Construction of future development under the proposed PMPU would temporarily require construction workers within the proposed PMPU area. During construction, it is anticipated that portable temporary restroom facilities would be brought to the site for construction workers. Wastewater generated at the portable restroom facilities would be hauled away and the waste would be disposed of at an appropriate facility in accordance with 17 CCR 8007, which requires the contents of portable toilets to be disposed of by draining or pumping into a sanitary sewer, an approved septic tank of sufficient capacity to handle the wastes, a suitably sized and constructed holding tank, approved by the local health department, or by any other method approved by the local health department. No wastewater treatment facilities, infrastructure improvements, or other expansions would be required as a result of construction of future development associated with implementation of the proposed PMPU. Therefore, construction impacts would be less than significant.

Stormwater Drainage Facilities

Stormwater drainage facilities (i.e., storm drains) may be temporarily modified during the construction of future development projects allowed under the proposed PMPU. Construction activities proposed consistent with the proposed PMPU that would disturb more than 1 acre of land would be required to comply with the Construction General Permit, which would require development and implementation of a SWPPP by a Qualified SWPPP Developer (as described in Section 4.8.3.2 in Section 4.8). The SWPPP would identify the construction BMPs to be implemented in order to protect stormwater runoff and would include a monitoring plan for measuring BMP effectiveness. BMPs are required to be inspected regularly by a Qualified SWPPP Practitioner. The Qualified SWPPP Practitioner monitors the construction activities to ensure the BMPs listed in the SWPPP are implemented and performing as anticipated. For projects under 1 acre of land, PMPU-related construction activities would still need to comply with the District's JRMP, which requires

preparation of a Construction BMP Plan. The Construction BMP Plan requires the same construction BMPs as a SWPPP, but does not include as many post-construction BMPs. Projects that would disturb less than 1 acre, but more than 100 square feet, would need to prepare and implement a Construction BMP Plan. Implementation of the SWPPP or Construction BMP Plan would include several BMPs, described in Section 4.8, which would slow onsite runoff and ensure that the available capacity of the existing stormwater facilities would be sufficient for anticipated increases in BMP-treated runoff water. As a result, construction of future development under the proposed PMPU would not result in significant impacts from the relocation or construction of new or expanded stormwater drainage facilities. Construction impacts would be less than significant.

Electricity and Natural Gas Facilities

Because of the urbanized nature of the proposed PMPU area, it is not anticipated that new or expanded electricity and natural gas facilities, which are owned and operated by SDG&E, would be required for construction activities associated with future PMPU-related development. As detailed in Section 4.6, construction associated with buildout of the proposed PMPU would require approximately 1,967,096 million BTUs of energy. Generally, construction activities do not involve the use of natural gas. Natural gas would not be supplied to support construction activities of future development because there would be no demand generated by construction. Additionally, electric construction tools that would be used during construction of future development would be powered by diesel-operated generators at a project site rather than by electricity from the power grid (except in rare circumstances). In the event that electricity is required for future construction activities, SDG&E would continue to provide service to the proposed PMPU area, and construction activities for future development would not require or result in the relocation or construction of new or expanded electricity and natural gas facilities, the construction of which would cause significant effects. Construction impacts associated with electricity and natural gas facilities would be less than significant.

Telecommunications Facilities

Because of the urbanized nature of the proposed PMPU area, it is not anticipated that new or expanded telecommunication facilities would be required for construction activities associated with future PMPU-related development. These providers would continue to serve the proposed PMPU area, and construction activities for future development would not require or result in the relocation or construction of new or expanded facilities, the construction of which would cause significant effects. Construction impacts associated with telecommunication infrastructure would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to expansion of utilities.

Construction activities associated with the new Waterfront Destination Park under Option 1 would generally involve the same types of construction activities described above, including grading activities and the use of heavy construction equipment and would require the use of utilities during construction, including water, wastewater, storm drains, electricity and natural gas, and telecommunications. However, construction activities under Option 1 would not require or result in the relocation or construction of new or expanded facilities, and impacts would be less than significant. Therefore, construction activities occurring under Option 1 would not result in any additional or more severe impacts related to extension of utilities than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to expansion of utilities.

Construction activities associated with the expanded Lane Field Setback Park under Option 2 would generally involve the same types of construction activities described above, including grading activities and the use of heavy construction equipment and would require the use of utilities during construction, including water, wastewater, storm drains, electricity and natural gas, and telecommunications. However, construction activities under Option 2 would not require or result in the relocation or construction of new or expanded facilities, and impacts would be less than significant. Therefore, construction activities occurring under Option 2 would not result in any additional or more severe impacts related to extension of utilities than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to expansion of utilities.

Construction activities associated with the new park space that could be developed under Option 3 would generally involve the same types of construction activities described above, including grading activities and the use of heavy construction equipment and would require the use of utilities during construction, including water, wastewater, storm drains, electricity and natural gas, and telecommunications. However, construction activities under Option 3 would not require or result in the relocation or construction of new or expanded facilities, and impacts would be less than significant. Therefore, construction activities occurring under Option 3 would not result in any additional or more severe impacts related to extension of utilities than buildout of the proposed PMPU without Option 3.

Operation

As described in Chapter 3, implementation of the proposed PMPU could result in the development of commercial recreation facilities within the proposed PMPU area, including within PD2, PD3, and PD8 where hotels, retail, and other commercial and visitor-serving development are planned. Planning District 4 would primarily comprise marine terminal and marine industrial operations.

Planning District 7 is predominately natural habitat, and operations within PD7 would generally consist of restoration and habitat mitigation banking. Future development in PD1, PD9, and PD10 would generally be limited to new recreational boat berthing slips and anchorages, and replacement in-kind or renovations of existing uses. Therefore, these improvements would not result in a substantial increase in water demand or in any increase in impervious surfaces compared to existing conditions. The proposed PMPU would also result in alterations to the circulation system, to provide infrastructure for transit opportunities, and pedestrians and bicyclists with improved travel routes, and to establish mobility hubs to meet the needs of the visitors to the proposed PMPU area. Implementation of the proposed PMPU would also result in in-water development, which would include dock maintenance, vessel slip reconfiguration and enhancement in the water basin, modification of marina capacity, enhancement or modifications to the existing anchorage area supporting transient vessel berthing, and the addition of aquaculture within the proposed PMPU area. Proposed primary water uses would include anchorage, commercial fishing berthing, marine services berthing, navigation corridor, open bay/water, recreational berthing, and sportfishing berthing. Allowable land uses would include commercial fishing, commercial recreation, institutional/roadway, marine sales and services, recreation open space, and sportfishing.

Water Facilities

The operation of future development consistent with the proposed PMPU would introduce new employees, visitors, and hotel guests to the proposed PMPU area, which would increase demand on existing water facilities that would serve future development under the PMPU. Note that this analysis focuses on the physical impacts of constructing any new or expanded water conveyance and treatment facilities needed to serve future development under the proposed PMPU. A detailed analysis of impacts of the proposed PMPU on water supply is provided below in Threshold 2.

Water demand would increase as a result of future development within the proposed PMPU area, and notably in PD2, PD3, and PD8 where future development may include hotels, retail, restaurants, and other commercial and visitor-serving development. As explained in Section 4.15.4.1, *Methodology*, and indicated in Table 4.15-8, implementation of the proposed PMPU could result in an increased demand for water of an additional 34 million gallons-per-year (approximately 104 AFY). To accommodate the additional water demand, new or expanded water conveyance infrastructure (i.e., new, upgraded, relocated, or expanded water lines into specific future project sites) may need to be installed by future development projects. Because the proposed PMPU area is largely urbanized, it is not anticipated that future development under the proposed PMPU, which would largely involve redevelopment of existing sites, would require the installation of water conveyance facilities into currently undeveloped areas. Beyond future development-specific water infrastructure upgrades, no water facility projects are planned as part of the proposed PMPU. While the specifications of individual future development, including timing, location, and size, are not known at this time, the potential impacts associated with the installation of new or expanded water pipelines to serve specific future development are generally known, and impacts associated with ground-disturbing activities would potentially occur. The impacts of ground disturbing activities are analyzed within this PEIR, including in Sections 4.3, *Biological Resources*, 4.4, *Cultural Resources and Tribal Cultural Resources*, 4.5, *Geology and Soils*, 4.7, *Hazards and Hazardous Materials*, and 4.8, *Hydrology and Water Quality*. Based on the determinations within these sections, land disturbance associated with installing water conveyance facilities would also have the potential to result in a significant impact (**Impact-UTIL-1**).

Wastewater Facilities

Operation of future development associated with implementation of the proposed PMPU would generate wastewater. During operation, wastewater generation within the proposed PMPU area is expected to increase approximately 28 million gallons per year (86 AFY) over existing conditions.

Because the proposed PMPU area is largely urbanized, it is not anticipated that future development under the PMPU, which would largely involve redevelopment of existing sites, would require the installation of new wastewater facilities into currently undeveloped areas. However, to accommodate the wastewater demand of future development, connections to existing wastewater conveyance lines would likely be required. Connection to the existing wastewater treatment system would adhere to all requirements of the adjacent city, including any applicable sewer design guidelines (see Section 4.15.3). While the specifications of individual future development, including timing, location, and size, are not known at this time, the potential impacts associated with installation of new or expanded wastewater conveyance facilities to serve specific future projects are generally known, and impacts associated with ground-disturbing activities would potentially occur. The impacts of ground disturbing activities are analyzed within this PEIR, including in Sections 4.3, 4.4, 4.5, 4.7, and 4.8. Based on the determinations within these sections, land disturbance associated with installing wastewater conveyance facilities would also have the potential to result in a significant impact (**Impact-UTIL-1**).

Stormwater Drainage Facilities

Most of the planning districts are largely built out (PD3) or would undergo little to no additional development (e.g., PD1, PD4, PD7, PD8, PD9, PD10). As such, the proposed PMPU would not be expected to result in a substantial increase in impervious surfaces compared to existing conditions in those planning areas. Planning District 2 would potentially see some additional impervious surfaces installed, but generally much of PD2, in the areas where development may occur, consists of impervious surfaces, including parking lots, internal roads, and several buildings that are shorter in height than what may be developed under the proposed PMPU. As such, because the proposed PMPU area is largely urbanized, it is not anticipated that future development under the proposed PMPU, which would largely involve redevelopment of existing sites, would require the installation of new stormwater drainage facilities into currently undeveloped areas. While the specifications of individual future development, including timing, location, and size, are not known at this time, the potential impacts associated with installation of new or expanded stormwater facilities to serve specific future development are generally known, and impacts associated with ground-disturbing activities would potentially occur. The impacts of ground-disturbing activities are analyzed within this PEIR, including in Sections 4.3, 4.4, 4.5, 4.7, and 4.8. Based on the determinations within these sections, land disturbance associated with installing stormwater drainage facilities would also have the potential to result in a significant impact (**Impact-UTIL-1**).

Electricity and Natural Gas Facilities

Electricity and natural gas in the proposed PMPU area are provided by SDG&E, which offers electricity and natural gas to approximately 3.4 million people within its approximately 4,100-square-mile service area in San Diego and Orange Counties. Future development under the proposed PMPU would increase demand for electricity by 88,647,100 kWh per year and would increase demand for natural gas by 3,988,639 therm per year and would require new connections to existing electricity and natural gas facilities within the proposed PMPU area. Because the proposed

PMPU area is largely urbanized, it is not anticipated that future development under the PMPU, which would largely involve redevelopment of existing sites, would require the installation of new electricity and natural gas facilities into currently undeveloped areas. Future development under the proposed PMPU could potentially result in an increase in electricity or natural gas demand that could require upgrades to on- or offsite electrical or natural gas facilities to accommodate operation of individual future development projects. As detailed in Section 4.6, operation associated with buildout of the proposed PMPU would require approximately 186,369 million BTUs of energy, which could require the installation of new or expanded electricity and natural gas facilities. Some of this demand could be met with the use of renewable energy under the City's Community Choice Aggregation/Energy program; however, even with the use of renewable energy, new electricity and natural gas facilities may be required to accommodate buildout of the proposed PMPU. As described in Section 4.15.3 above, new offsite electricity and natural gas facilities would typically need to be permitted by the California Energy Commission or California Public Utilities Commission. While the specifications of individual future development, including timing, location, and size, are not known at this time, the potential impacts associated with installation of new or expanded electricity and natural gas facilities to serve specific future development are generally known, and impacts associated with ground-disturbing activities would potentially occur. The impacts of ground-disturbing activities are analyzed within this PEIR, including in Sections 4.3, 4.4, 4.5, 4.7, and 4.8. Based on the determinations within these sections, land disturbance associated with installing electricity and natural gas facilities would also have the potential to result in a significant impact **(Impact-UTIL-1)**.

Telecommunications Facilities

Telephone, cellular, video/cable, DSL, and broadband services are available from a variety of privately owned providers, such as AT&T and Cox, for customers within the proposed PMPU area. Because the proposed PMPU area is within a highly urbanized setting, it is not anticipated that future development under the proposed PMPU, which would largely involve redevelopment of existing sites, would extend into undeveloped areas not currently served by telecommunication facilities. As such, the proposed PMPU area is comprehensively served by telecommunication facilities and it is not anticipated that new or expanded telecommunication facilities would be required to serve future PMPU-related development. However, depending on the specific use, location, or scale of future development allowed under the proposed PMPU, it is possible that some future development may require the installation of new telecommunication facilities or improvements to existing facilities, which could result in physical environmental impacts. As noted above, relocation or construction of new or expanded telecommunication facilities would need to be permitted by the adjacent city in which it is located. As described in Chapter 3, the vast majority of development that may occur under the proposed PMPU is located in PD2 and PD3, both of which are within the City of San Diego's service area. Future siting of telecommunications infrastructure within the City of San Diego would be in accordance with the Diego Municipal Code Section 141.0420, which regulates wireless communications facilities, as well as the City's Wireless Communications Facilities Guidelines. Similarly, any future telecommunications facilities within the City of Imperial Beach would be required to comply with Imperial Beach Municipal Code Chapter 19.90, while any new facilities within the City of Coronado would be required to comply with Coronado Municipal Code Chapter 52.40. While the specifications of individual future development, including timing, location, and size, are not known at this time, the potential impacts associated with installation of new or expanded telecommunication facilities to serve specific future development are generally known, and impacts associated with ground-disturbing activities would potentially occur. The

impacts of ground disturbing activities are analyzed within this PEIR, including in Sections 4.3, 4.4, 4.5, 4.7, and 4.8. Based on the determinations within these sections related, land disturbance associated with installing telecommunication facilities would also have the potential to result in a significant impact (**Impact-UTIL-1**).

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to expansion of utilities (**Impact-UTIL-1**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities associated with a new Waterfront Destination Park under Option 1 may require water and wastewater treatment for irrigation and water features, as well as possible restroom facilities. Electricity may also be required for security lighting and irrigation/water feature controls. As such, Option 1 would require minimal, if any, expanded water, wastewater treatment or stormwater drainage, electrical power, natural gas, or telecommunications facilities. Therefore, operations under Option 1 would not result in any additional or more severe impacts related to utilities than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to expansion of utilities (**Impact-UTIL-1**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities associated with the expanded Lane Field Setback Park under Option 2 may require water and wastewater treatment for irrigation and water features, as well as possible restroom facilities. Electricity may also be required for security lighting and irrigation/water feature controls. As such, Option 2 would require minimal, if any, expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities. Therefore, operations under Option 2 would not result in any additional or more severe impacts related to utilities than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to expansion of utilities (**Impact-UTIL-1**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities associated with new park space that could be developed under Option 3 may require water and wastewater treatment for irrigation and water features, as well as possible restroom facilities. Electricity may also be required for security lighting and irrigation/water feature controls. As such, Option 3 would require minimal, if any, expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities. Therefore, operations under Option 3 would not result in any additional or more severe impacts related to utilities than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant effects. The proposed PMPU policies would help to minimize adverse effects on utilities through promoting conservation, reduction, and planned capital improvements. For instance, SR Policy 3.1.7 promotes implementation of water conservation strategies. In addition, ECON Policy 1.2.4 promotes creation of financing mechanisms to fund the building of infrastructure improvements, which would help ensure the provision of adequate water, stormwater, and communications infrastructure.

Impact Determination and Mitigation

Implementation of the proposed PMPU may require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant effects.

Significant Impacts

Impact-UTIL-1: Utility-Related Land Disturbance. While the specifications of individual future development, including timing, location, and size, are not known at this time, the potential impacts associated with installation of new or expanded utility facilities to serve specific future development are generally known, and significant impacts associated with ground-disturbing activities would potentially occur. The impacts of ground-disturbing activities are analyzed within this PEIR, including in Sections 4.3, 4.4, 4.5, 4.7, and 4.8. Based on the determinations within these sections, land disturbance associated with installing utility facilities would also have the potential to result in a significant impact on these resources.

Mitigation Measures

For **Impact-UTIL-1**:

Implement **MM-BIO-2**, **MM-BIO-5**, **MM-BIO-8**, and **MM-BIO-9**, as described in Section 4.3, *Biological Resources*

Implement **MM-CUL-1** through **MM-CUL-3**, as described in Section 4.4, *Cultural Resources and Tribal Cultural Resources*

Implement **MM-GEO-1**, as described in Section 4.5, *Geology and Soils*

Implement **MM-HAZ-1** and **MM-HAZ-2**, as described in Section 4.7, *Hazards and Hazardous Materials*

Implement **MM-WQ-1** through **MM-WQ-7**, as described in Section 4.8, *Hydrology and Water Quality*.

Level of Significance After Mitigation

Implementation of **MM-BIO-2**, **MM-BIO-5**, **MM-BIO-8**, **MM-BIO-9**, **MM-CUL-1** through **MM-CUL-3**, **MM-GEO-1**, **MM-HAZ-1** and **MM-HAZ-2**, and **MM-WQ-1** through **MM-WQ-7** would reduce impacts from ground-disturbing activities that could result from construction activities associated with new or expanded utilities. Specifically, **MM-BIO-2**, **MM-BIO-5**, **MM-BIO-8**, and **MM-BIO-9** would reduce impacts on biological resources to less than significant, **MM-GEO-1** would reduce impacts on paleontological resources to less than significant, and **MM-HAZ-1** and **MM-HAZ-2** would reduce impacts related to hazardous materials to less than significant. However, because these mitigation measures would not reduce all ground-disturbing impacts on cultural resources and water quality to less than significant, **Impact-UTIL-1** would be significant and unavoidable.

Threshold 2: Have sufficient water supplies available to serve the proposed PMPU and reasonably foreseeable future development during normal, dry, and multiple dry years?

Impact Analysis

Construction

Water would be required during future construction activities for such uses as dust suppression from grading and demolition, mixing of concrete and other construction materials, and cleaning equipment and tools. Water usage during construction would be temporary and the City of San Diego's recycled water is treated to a Title 22 disinfected tertiary level quality, which is suitable for construction purposes. The City administers a Recycled Water Tanker Truck Program that allows water tanker trucks used for construction purposes, such as dust suppression, to fill up at an approved City facility. Currently there are fill stations at 3245 Monument Road in South Bay and 10151 Meanley Drive in Scripps Ranch, with a third available soon at 4949 Eastgate Mall in North City (City of San Diego 2021). As discussed in the 2020 UWMP, PUD provided 8,185 AFY of non-potable recycled water to customers within the City of San Diego in 2015, and increased that amount to 10,393 AFY of non-potable recycled water within the City of San Diego in 2020. It is estimated that 13,773 AFY will be available by 2025. Moreover, the City has taken several steps to increase production of recycled potable water, which includes the Pure Water Phase I and Phase II projects. Potable recycled water is anticipated to increase supply from an estimated 16,800 AFY in 2025 to 33,600 AFY in 2030 to 92,960 AFY in 2035 through 2045 (PUD 2021).

In addition, because most of the development under the proposed PMPU would be infill development, future redevelopment projects would potentially decrease existing water use at the site during construction because operations of the previous use would cease. Furthermore, construction activities for future development associated with the proposed PMPU would not occur all at once, but rather would occur throughout the PMPU's planning horizon (i.e., 2050). As such, the water demand from construction of PMPU-related development would be dispersed over an

approximately 30-year period. Therefore, with the continued increase in recycled water supplies forecasted and the availability of recycled water to construction water tankers, water supply for construction activities would continue to be available through the proposed PMPU planning horizon. Impacts on water supply from the construction of future development projects would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would not result in a significant impact related to water supply. This less-than-significant impact would also occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with Option 1 would be similar as those described in the analysis above, which would increase demand on water. Construction activities for future development under Option 1, including construction of a new Waterfront Destination Park and the closure of a portion of North Harbor Drive, would require water use for dust suppression from grading and demolition, mixing of concrete and other construction materials, and cleaning equipment and tools. Given the potential size of the project site for the new Waterfront Destination Park and relatively limited construction duration, this would not result in a substantial demand for water. Therefore, construction activities under Option 1 would not result in any additional or more severe impacts related to water supply than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would not result in a significant impact related to water supply. This less-than-significant impact would also occur within PD3 under Option 2 as a result of same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with Option 2 would be similar as those described in the analysis above, which would increase demand on water. Construction activities for the Lane Field Setback Park under Option 2, would require water use for dust suppression from grading and demolition, mixing of concrete and other construction materials, and cleaning equipment and tools. Given the size of the project site for the Lane Field Setback Park and relatively limited construction duration, this would not result in a substantial demand for water. Therefore, construction activities under Option 2 would not result in any additional or more severe impacts related to water supply than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would not result in a significant impact related to water supply. This less-than-significant impact would also occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Construction activities associated with new park space under Option 3 would be similar as those described in the analysis above, which would increase demand on water. Construction activities for Option 3 would require water use for dust suppression from grading and demolition, mixing of concrete and other construction materials, and cleaning equipment and tools. Given the size of the project site for the new park under Option 3, the relatively limited construction duration, and the continued increase in recycled water supplies anticipated by the City of San Diego, this would not result in a substantial demand for water. Therefore, construction activities under Option 3 would not result in any additional or more severe impacts related to water supply than buildout of the proposed PMPU without Option 3.

Operation

Chapter 3 identifies the increase in future development under the PMPU that could occur in PD1, PD2, PD3, PD4, PD7, PD8, PD9, and PD10 by 2050, and water demand associated with potential future development is presented in Table 4.15-8. Using CalEEMod default rates for water demand, additional water demand associated with operation of future development under the proposed PMPU is estimated to increase by approximately 104 AFY over an existing (2016) demand of 9,609 AFY, for a total demand (existing plus proposed) of approximately 9,712 AFY by the year 2050 (see Table 4.15-8). This water demand would not occur all at once; rather, the demand would increase over the planning horizon of the proposed PMPU as development projects are proposed, constructed, and become operational. The majority of this demand would be generated by future development of new commercial recreation facilities within PD2 and PD3, including hotels, retail, and other commercial and visitor-serving development.

PD1, PD9, and PD10 would generally involve minimal increases in recreational berthing space and renovations or in-kind replacement of existing buildings and would not result in substantial increase in water demand, and the 18,000 square feet of potential retail space in PD8 would only account for a minor increase in water demand (using the generation rates in Table 4.15-7, this use would account for approximately 13 AFY of the overall PMPU water demand of 104 AFY). In addition, because PD4 is almost entirely built out or, in the case of the Tenth Avenue Marine Terminal (TAMT), currently has a modernization plan to increase throughput to the maximum sustainable capacity and has established mitigation measures in the certified TAMT EIR, the proposed PMPU would not result in a substantial increase in water demand in PD4. Uses within PD7 such as habitat conservation, restoration, and mitigation banking would not result in development that would have the potential to substantially increase water demand. As such, water demand associated with PD7 is not anticipated to substantially affect water supplies from Sweetwater Authority. In addition, development within PD9 and PD10, which are served by Cal Am, would be minimal and would not increase water demand beyond available supplies.

In terms of accounting for the proposed PMPU, water demand projections in the City of San Diego's 2020 UWMP were based on SANDAG's latest growth forecasts, which anticipate future growth through 2050 based on existing local jurisdiction's long-range land use plans. The increase in water

demand generated by implementation of the proposed PMPU (104 AFY) would represent an increase in the City of San Diego's total projected 2045 normal year water demand of 228,065 AFY and the projected fifth-year multiple-dry year demand of 233,538 AFY (PUD 2021). However, the City's 2020 UWMP was based on SANDAG's Series 14 growth forecasts, which did not account for the growth anticipated under the proposed PMPU because the PMPU was not an adopted plan at the time the forecasts were developed (PUD 2021). Therefore, it is not certain that PUD's supply through 2045 could meet the additional demand of 104 AFY that could occur under the proposed PMPU. In addition, because the proposed PMPU planning horizon extends to 2050, it is currently unknown whether there would be sufficient water supplies available after 2045. As part of the normal water supply planning process, the proposed PMPU buildout scenario would be included in a future cycle update of the UWMP, which occurs every 5 years. However, until the proposed PMPU's water demand is included in the UWMP, the additional future water supply required to meet the proposed PMPU's demand is not assured, and it is possible that the PMPU's increase in water demand could exceed the water supplies available from existing entitlements and resources (**Impact-UTIL-2**).

Future development would need to install water conservation measures required by the 2019 California Green Building Standards Code, Title 24, Part 11, Chapter 5 (Non-Residential Mandatory Measures), including the use of toilets that do not exceed 1.28 gallons per flush, urinals that do not exceed 0.125 gallons (wall mounted) or 0.5 gallon (floor mounted) per flush, showerheads that do not exceed 1.8 gallons per minute at 80 pounds per square inch (psi), lavatory faucets that do not exceed 0.5 gallon per minute at 60 psi, and commercial kitchen faucets that do not exceed 1.8 gallons per minute at 60 psi. Outdoor water use must be recycled for all new non-residential developments where disinfected tertiary recycled water is available from the municipal source. Moreover, with the signing of Executive Order B-29-15, 23 CCR Division 2, Chapter 2.7 (Model Water Efficient Landscape Ordinance) established that landscaping must meet specific water efficiency metrics. Implementation of water conservation measures required by the California Green Building Standards Code would reduce the proposed PMPU's demand on potable water supplies.

Beyond the water use requirements of the Green Building Code and the Water Code, proposed PMPU policies such as SR Policy 3.1.3, SR Policy 3.1.5, SR Policy 3.1.6, and SR Policy 3.1.7 promote the reduction of resource consumption and sustainable operations, the use of "green" design, and require future development to implement water conservation strategies. Strategies could include use of water-wise landscaping, separate metering for irrigation and cooling towers, and use of water efficient plumbing, such as modern flush valves, aerators on faucets, or touch free faucets.

However, these policies alone would not fully reduce impacts because it is not known at this time the extent to which future development would be able to implement water conservation strategies. Additionally, if water conservation proves inadequate, the member cities or water suppliers would be forced to calibrate demand to supply by depriving users of water, essentially forcing them to conserve. Therefore, during the course of the buildout of the proposed PMPU there may not be sufficient water supplies available to serve future development during normal, dry, and multiple dry years, and the impact would be significant without mitigation (**Impact-UTIL-2**). Water use would be reduced through water conservation measures and the implementation of proposed PMPU policies such as SR Policy 3.1.7, which promotes implementation of water conservation strategies. In addition, implementation of **MM-UTIL-1** through **MM-UTIL-4** would reduce this impact to a level below significant by ensuring that the anticipated growth that could occur under the proposed PMPU would be accounted for in the next round of UWMP updates, and by requiring future project

proponents to demonstrate that sufficient water supplies are available prior to project approval. In the event that sufficient water supply is not available, **MM-UTIL-2** would prohibit such development from being approved.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to water supply (**Impact-UTIL-2**). This significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities associated with a new Waterfront Destination Park under Option 1 could require water for irrigation, water features, or restroom facilities and additional water to accommodate the small increase in Commercial Recreational uses and may require slightly more water than existing uses. However, this water demand would likely be reduced compared to the water demand that would be generated under the proposed PMPU within the Option 1 boundaries. As discussed above, SR Policy 3.1.3 SR Policy 3.1.5, SR Policy 3.1.6, and SR Policy 3.1.7 promote the reduction of resource consumption and sustainable operations, and the use of “green” design, and implementation of water conservation strategies. As such, it is anticipated that water demand under this option would be minimal and would not exceed available supplies. Therefore, operations under Option 1 would not result in any additional or more severe impacts related to water supply than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to water supply (**Impact-UTIL-2**). This significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities associated with the expanded Lane Field Setback Park under Option 2 could require water for irrigation, water features, or restroom facilities and may require a similar or slightly less use of water than existing conditions. In addition, this water demand would likely be reduced compared to the water demand that would be generated under the proposed PMPU within the Option 2 boundaries. As discussed above, SR Policy 3.1.3 SR Policy 3.1.5, SR Policy 3.1.6, and SR Policy 3.1.7 promote the reduction of resource consumption and sustainable operations, and the use of “green” design, and implementation of water conservation strategies. As such, it is anticipated that water demand under this option would be minimal and would not exceed available supplies. Therefore, operations under Option 2 would not result in any additional or more severe impacts related to water supply than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a significant impact related to water supply (**Impact-UTIL-2**). This significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities associated with additional park space under Option 3 could require water for irrigation, water features, or restroom facilities and may require a similar or slightly less use of water than existing conditions. In addition, this water demand would likely be reduced compared to the water demand that would be generated under the proposed PMPU within the Option 3 boundaries. As discussed above, SR Policy 3.1.3 SR Policy 3.1.5, SR Policy 3.1.6, and SR Policy 3.1.7 promote the reduction of resource consumption and sustainable operations, and the use of “green” design, and implementation of water conservation strategies. As such, it is anticipated that water demand under this option would be minimal and would not exceed available supplies. Therefore, operations under Option 3 would not result in any additional or more severe impacts related to water supply than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to having insufficient water supplies available to serve the proposed PMPU and future development during normal, dry, and multiple dry years. Rather, the proposed PMPU policies would help to minimize adverse effects related to water supply by promoting conservation, reduction, and planned capital improvements. For instance, SR Policy 3.1.7 promotes implementation of water conservation strategies, which would not result in adverse physical impacts, but would be beneficial to existing water supplies.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not have sufficient water supplies available to serve the proposed PMPU and future development during normal, dry, and multiple dry years.

Significant Impacts

Impact-UTIL-2: Insufficient Water Supplies Available to Serve the Proposed PMPU During Operation of Future Development. Due to the significant increase in water demand as a result of implementation of the proposed PMPU, sufficient water supplies may not be available to serve future development under the proposed PMPU during normal, dry, and multiple dry years. Therefore, given the increase in water demand, which is necessary for operation of future development allowed under the proposed PMPU, potential impacts are considered significant.

Mitigation Measures

For **Impact-UTIL-2**:

MM-UTIL-1: Update the UWMP with New Growth Projections. Within 6 months of California Coastal Commission certification of the proposed PMPU, the District shall provide SANDAG with amended growth assumptions and changes to water and land use designations associated with

the proposed PMPU. The District shall coordinate with SANDAG and the City of San Diego to ensure the UWMPs are updated as part of the upcoming revision cycle to reflect the updated growth assumptions of the proposed PMPU. Until the UWMP is updated to account for projects proposed under a certified PMPU, the District shall implement **MM-UTIL-2** to ensure sufficient water supply exists for individual projects.

MM-UTIL-2: Prepare a Water Demand Analysis to Determine if Sufficient Water Supplies are Available. Prior to District's approval of any future development project that would equate to a water demand project, as defined by State CEQA Guidelines Section 15155, and before the successful update to the applicable UWMP(s) required under **MM-UTIL-1**, the District shall require the project proponent to prepare a water demand analysis.

In the event that project demand exceeds available supplies after incorporation of all feasible water-efficient measures, the project proponent shall be required to demonstrate how and where additional supply to meet the project's demand will be secured, as well as analyzing the potential impacts of acquiring water from a new water source; or the project shall be redesigned to further reduce the demand for water to be within the available supplies. The District shall not approve any future development proposal unless the project proponent can demonstrate that the project's water supply demands will be met.

MM-UTIL-3: Implement Water Conservation Measures. The project proponent shall incorporate and implement water-efficient design measure into project design. Water-efficient design measures shall at a minimum, include:

- Implement indoor water reduction measures, including high-efficiency toilets, high-efficiency urinals, low-flow faucets, and low-flow showers (as applicable).
- Install only drought-tolerant landscaping, per PMPU ECO Policy 1.1.8, and perform any landscaping watering through a drip system or low-flow irrigation devices.
- Install cisterns above or below ground that collect and store runoff from rooftops and other impervious surfaces.
- Install water-efficient water coolers and equipment and monitor cooling tower and boiler water chemistry to minimize mineral buildup in the system and maximize the number of times water can be recycled through the system.
- Limit the use of turf.
- Educate employees on water conservation measures on an annual basis and post water conservation stickers, signs, and posters in bathrooms, kitchens, cafeterias, conference rooms, and other places where employees congregate.

Level of Significance After Mitigation

Implementation of **MM-UTIL—1** would ensure that the proposed PMPU's potential growth would be incorporated into the next SANDAG growth projections and that the water demand that could occur under the proposed PMPU would be incorporated into the next updates to the UWMP(s), which would ensure that sufficient supply exists through the horizon year of the proposed PMPU. Implementation of **MM-UTIL-2** and **MM-UTIL-3** would require future project proponents to demonstrate that sufficient water supplies are available prior to project approval and to implement necessary water conservation measures, respectively. In the event that sufficient water supply is not

available, **MM-UTIL-2** would prohibit such development from being approved. Therefore, construction and operational impacts would be less than significant after mitigation.

Threshold 3: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the proposed PMPU's projected demand in addition to the provider's existing commitments?

Impact Analysis

Construction

Future development associated with the proposed PMPU would potentially include the construction of a variety of types of development, including new hotels and lower cost accommodations, restaurants and entertainment venues, park space and promenades, retail, development would occur periodically throughout the PMPU's 30-year planning horizon and would potentially involve excavation, grading, filling and compaction, utility installation, and construction of aboveground facilities and buildings. Onsite construction workers would potentially generate wastewater during construction of future development projects. However, the wastewater use would not affect onsite facilities or facilities within the proposed PMPU area because portable temporary restroom facilities would be brought to the development sites for construction workers, as is typical of construction sites. Wastewater generated at the portable restroom facilities would be hauled away to an authorized treatment facility, such as PLWPT or SBWRP, in accordance with 17 CCR 8007, which requires the contents of portable toilets to be disposed of by draining or pumping into a sanitary sewer, an approved septic tank of sufficient capacity to handle the wastes, a suitably sized and constructed holding tank, approved by the local health department, or by any other method approved by the local health department. Similar to water use, because most of the future development occurring under the proposed PMPU would be infill development, wastewater generation at a site would be substantially reduced during construction. Consequently, construction activities associated with future development are not anticipated to generate significant amounts of wastewater. Therefore, construction activities would not result in an inadequate capacity to serve the proposed PMPU's projected construction-related wastewater demand, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, construction activities occurring under the proposed PMPU would result in a less-than-significant impact related to wastewater.

Construction activities associated with Option 1 would be same as those described in the analysis above and would result in increased demand on wastewater treatment from construction workers. However, the wastewater use would not affect onsite facilities or facilities within the proposed PMPU area because portable temporary restroom facilities would be brought to the development sites for construction workers, as is typical of construction sites. Wastewater generated at the portable restroom facilities would be hauled away to an authorized treatment facility, such as PLWPT or SBWRP, in accordance with the regulations described above. As such, construction activities associated with future development under Option 1 are not anticipated to generate significant amounts of wastewater, and impacts would be less than significant. Therefore, construction under Option 1 would not result in any additional or more severe impacts related to wastewater than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU would result in a less-than-significant impact related to wastewater.

Construction activities associated with Option 2 would be same as those described in the analysis above and would result in increased demand on wastewater treatment from construction workers. However, the wastewater use would not affect onsite facilities or facilities within the proposed PMPU area because portable temporary restroom facilities would be brought to the development sites for construction workers, as is typical of construction sites. Wastewater generated at the portable restroom facilities would be hauled away to an authorized treatment facility, such as PLWPT or SBWRP, in accordance with the regulations described above. As such, construction activities associated with future development under Option 2 are not anticipated to generate significant amounts of wastewater, and impacts would be less than significant. Therefore, construction under Option 2 would not result in any additional or more severe impacts related to wastewater than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU would result in a less-than-significant impact related to wastewater.

Construction activities associated with Option 3 would be same as those described in the analysis above and would result in increased demand on wastewater treatment from construction workers. However, the wastewater use would not affect onsite facilities or facilities within the proposed PMPU area because portable temporary restroom facilities would be brought to the development sites for construction workers, as is typical of construction sites. Wastewater generated at the portable restroom facilities would be hauled away to an authorized treatment facility, such as PLWPT or SBWRP, in accordance with the regulations described above. As such, construction activities associated with future development under Option 3 are not anticipated to generate significant amounts of wastewater, and impacts would be less than significant. Therefore, construction under Option 3 would not result in any additional or more severe impacts related to wastewater than buildout of the proposed PMPU without Option 3.

Operation

Operation of future PMPU-related development would increase wastewater generation within the proposed PMPU area compared to existing conditions. Implementation of the proposed PMPU would result in an additional 86 AFY (0.24 acre-feet per day) of wastewater from the introduction of new hotel guests, retail and restaurant visitors, permanent employees, and recreational waterfront visitors (approximately 0.077 mgd). The PLWTP, which serves PD1, PD2, PD3, PD4, PD9, and PD10, has a daily wastewater treatment capacity of 737 acre-feet (240 mgd) and a daily peak wet weather capacity of approximately 1,326 acre-feet (432 mgd), and treats approximately 537 acre-feet (175 mgd) of wastewater per day. Based on the above, the PLWTP has a remaining capacity of 200 acre-feet per day (65 mgd). Therefore, the proposed PMPU's increased wastewater demand of 86 AFY (0.24 mgd) could be accommodated by the remaining capacity at the PLWTP.

The SBWRP, which serves PD7 and PD8, has a total treatment capacity of 17,000 AFY (15 mgd). While wastewater was not estimated separately for each PD, improvements associated with the proposed water and land uses at PD7, such as habitat conservation, restoration, and mitigation banking, would not generate wastewater, and PD8 would only potentially include an additional 18,000 square feet of retail space, which would produce a minimal amount of wastewater. Using the generation rates in Table 4.15-8, PD8 could result in a maximum additional generation of 12.24 AFY (0.011 mgd) of wastewater, which would fall within the treatment capacity of the SBWRP.

Based on the above, the existing wastewater treatment capacity of the PLWTP and SBWRP would be sufficient to accommodate the proposed PMPU. Therefore, implementation of the proposed PMPU would not result in the need to expand the capacity of the PLWTP or the SBWRP, and the proposed PMPU would have a less-than-significant impact on wastewater capacity.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to wastewater. This less-than-significant impact would still occur within PD3 under Option 1 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities associated with a new Waterfront Destination Park under Option 1 could include generation of wastewater related to restroom facilities for the park or associated with the increased Commercial Recreational uses. However, the small amount of wastewater generated under Option 1 would not result in a substantial difference in the wastewater generation estimated in Table 4.15-8 above, and would likely be reduced compared to the wastewater that would be generated under the proposed PMPU within the Option 1 boundaries. Therefore, operations under Option 1 would result in less-than-significant impacts related to wastewater.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to wastewater. This less-than-significant impact would still occur within PD3 under Option 2 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities associated with the expanded Lane Field Setback Park under Option 2 could include generation of wastewater related to restroom facilities for the park. However, the small amount of wastewater generated under Option 2 would not result in a substantial difference in the wastewater generation estimated in Table 4.15-8 above, and would likely be reduced compared to the wastewater that would be generated under the proposed PMPU within the Option 2 boundaries. Therefore, operations under Option 2 would result in less-than-significant impacts related to wastewater.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to wastewater. This less-than-significant impact would still occur within PD3 under Option 3 as a result of the same future development that could still occur outside of the option boundary within PD3.

Operational activities associated with the new park space that could be developed under Option 3 could include generation of wastewater related to restroom facilities for the park. However, the small amount of wastewater generated under Option 3 would not result in a substantial difference in the wastewater generation estimated in Table 4.15-8 above, and would likely be reduced compared to the wastewater that would be generated under the proposed PMPU within the Option 3 boundaries. Therefore, operations under Option 3 would result in less-than-significant impacts related to wastewater.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to inadequate wastewater capacity to serve the proposed PMPU's projected demand in addition to the provider's existing commitments. Instead, policies focus on sustainable solutions related to utilities and promote the establishment of financing mechanisms to fund the building of new, or improvements to existing, infrastructure.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not result in a determination by the wastewater treatment provider that it does not have adequate capacity to serve the proposed PMPU's projected demand in addition to the provider's existing commitments. Impacts would be less than significant.

Threshold 4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goal?

Impact Analysis

Construction

If the proposed PMPU is approved and implemented, it is reasonably foreseeable that future development would be constructed between the proposed PMPU's approval and its planning horizon of 2050. Most of the potential increase in future hotel, restaurant and retail development under the PMPU would occur in PD2 and PD3. Construction and demolition activities associated with PMPU would occur over a mid- to long-term period and have the potential to generate solid waste, including wood, cardboard, metals, plastics, concrete, and other building materials. Specific development proposals are not available at this programmatic level, and, as such, specific amounts of construction and demolition debris are not yet known. However, construction of future development under the proposed PMPU would be required to comply with applicable waste diversion requirements. These include the City of San Diego's C&D Debris Deposit Ordinance for future development within the City of San Diego's service area, which mandates that projects requiring building and demolition permits pay a refundable waste diversion deposit and divert at least 65 percent of their debris from landfills by recycling, reusing, or donating usable materials. Future development within the cities of Coronado and Imperial Beach, which do not have ordinances for construction and demolition debris recycling, would be required to comply with the construction material diversion requirements of CalGreen. Section 5.408 of CalGreen similarly requires that a minimum of 65 percent of all non-hazardous construction and demolition waste for non-residential projects be recycled and/or salvaged for reuse. Compliance with these regulations would reduce the amount of solid waste that would be disposed of in landfills from future construction activities. Moreover, the County's Five-Year Review Report of the Countywide Integrated Waste Management Plan indicates sufficient landfill capacity to accommodate solid waste disposal through 2052. Therefore, because a majority of any future construction-related waste would be recycled or salvaged for reuse per existing local and state regulations (i.e., compliance is mandatory) and the available landfill capacity would exist through the life of the PMPU, the proposed PMPU would not exceed the remaining capacity of the existing landfills, and new or expanded landfills would not be required as a direct result of the construction waste generated from future development associated with the PMPU.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to solid waste.

Construction of Recreation Open Space and Commercial Recreation uses under Option 1 would be required to comply the City of San Diego's C&D Debris Deposit Ordinance for future development within the City of San Diego, which mandates that projects requiring building and demolition permits pay a refundable waste diversion deposit and divert at least 65 percent of their debris from landfills by recycling, reusing, or donating usable materials. With these diversion requirements, Option 1 would not generate substantial construction-related solid waste. Therefore, construction activities occurring under Option 1 would not result in any additional or more severe impacts related to solid waste than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to solid waste.

Construction activities associated with the expanded Lane Field Setback Park under Option 2 would be required to comply the City of San Diego's C&D Debris Deposit Ordinance for future development within the City of San Diego, which mandates that projects requiring building and demolition permits pay a refundable waste diversion deposit and divert at least 65 percent of their debris from landfills by recycling, reusing, or donating usable materials. With these diversion requirements, Option 2 would not generate substantial construction-related solid waste. Therefore, construction activities occurring under Option 2 would not result in any additional or more severe impacts related to solid waste than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to solid waste.

Construction activities associated with new park space that could be developed under Option 3 would be required to comply the City of San Diego's C&D Debris Deposit Ordinance for future development within the City of San Diego, which mandates that projects requiring building and demolition permits pay a refundable waste diversion deposit and divert at least 65 percent of their debris from landfills by recycling, reusing, or donating usable materials. With these diversion requirements, Option 3 would not generate substantial construction-related solid waste. Therefore, construction activities occurring under Option 3 would not result in any additional or more severe impacts related to solid waste than buildout of the proposed PMPU without Option 3.

Operation

Implementation of the proposed PMPU would increase operational activities in most of the planning districts because it would allow for the expansion of existing uses, as well as the establishment of new commercial, maritime, and recreational land uses. The increase in water and land uses and associated development would result in the generation of solid waste.

As described in Section 4.15.2.4 *Solid Waste*, there are four active landfills in San Diego County that accept solid waste. Table 4.15-6 provides the landfills' permitted remaining capacities and estimated remaining lifespans. Solid waste disposal needs would be served by various franchise waste haulers and be transported to the Miramar, Sycamore, Otay and/or Borrego Landfills. Miramar Landfill is projected to reach capacity in 2031 and Sycamore Canyon is anticipated to reach capacity in 2052. The Otay Landfill is projected to reach full capacity in 2030, and Borrego Landfill is anticipated to reach capacity in 2046. Total remaining capacity at these four landfills equals approximately 144,633,020 cubic yards. As noted above, the Five-Year Review Report indicates, given several different possible scenarios, the County of San Diego has sufficient landfill capacity to accommodate disposal through 2052.

Once operational, full buildout of the proposed PMPU would result in a generation of an additional approximately 1,755 cubic yards of solid waste per year (see Table 4.15-8). Miramar Landfill is closest to a majority of the proposed PMPU area and therefore would serve most future PMPU-related development. Miramar Landfill is currently projected to close in 2031. In the event that Miramar Landfill's capacity is reached, solid waste would be routed to Sycamore Canyon Landfill, which as indicated in the County's Five-Year Review Report has sufficient capacity to meet solid waste demand through 2052 given existing disposal trends and if planned expansions of that landfill occur. Therefore, solid waste generated under the proposed PMPU would not exceed the remaining capacity of this landfill and impacts are less-than-significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to solid waste.

Operational activities associated with a new Waterfront Destination Park under Option 1 would result in the generation of solid waste, but the difference in uses that could occur under Option 1 would not result in a substantial difference in the amount of solid waste generated under the proposed PMPU as indicated in Table 4.15-8, and would likely be reduced compared to the solid waste that would be generated under the proposed PMPU within the Option 1 boundaries. Therefore, operations under Option 1 would result in less-than-significant impacts related to solid waste.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to solid waste.

Operational activities associated with the expanded Lane Field Setback Park under Option 2 would result in the generation of solid waste, but the difference in uses that could occur under

Option 2 would not result in a substantial difference in the amount of solid waste generated under the proposed PMPU as indicated in Table 4.15-8, and would likely be reduced compared to the solid waste that would be generated under the proposed PMPU within the Option 2 boundaries. Therefore, operations under Option 2 would result in less-than-significant impacts related to solid waste.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to solid waste.

Operational activities associated with new park space that could be developed under Option 3 would result in the generation of solid waste, but the difference in uses that could occur under Option 3 would not result in a substantial difference in the amount of solid waste generated under the proposed PMPU as indicated in Table 4.15-8, and would likely be reduced compared to the solid waste that would be generated under the proposed PMPU within the Option 3 boundaries. Therefore, operations under Option 3 would result in less-than-significant impacts related to solid waste.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to the generation of solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goal.

Impact Determination and Mitigation

Implementation of the proposed PMPU would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goal. Impacts would be less than significant.

<p><i>Threshold 5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</i></p>

Impact Analysis

State and local management and reduction statutes and regulations related to solid waste include AB 939, AB 341, and the San Diego City Council Policy 900-16 and the City of San Diego C&D Debris Deposit Ordinance. AB 939 requires jurisdictions to utilize “integrated waste management,” and established mandatory State waste diversion goals of 25 percent by the year 1995 and 50 percent by the year 2000, and, with the adoption of AB 341 in May 2012, 75 percent of solid waste from landfills by 2020. AB 341 also establishes the statewide mandatory commercial recycling program, which requires businesses that generate 4 cubic yards or more of commercial solid waste per week, or multi-family residential dwellings of five units or more, to implement recycling practices during operation to help the State achieve the statewide diversion goal of 75 percent.

The San Diego City Council Policy 900-16 and the City of San Diego C&D Debris Deposit Ordinance, both of which establish diversion goals for waste generated from construction and demolition activities.

Construction

During construction activities for future development associated with the proposed PMPU, construction and demolition debris would be recycled at local recycling facilities in accordance with the City of San Diego's C&D Debris Deposit Ordinance and the City of San Diego's Council Policy 900-16, Construction & Demolition Material Recycling (for future development within the City of San Diego), and/or CalGreen. The City of San Diego's C&D Debris Deposit Ordinance mandates that projects requiring building and demolition permits pay a refundable waste diversion deposit and divert at least 65 percent of their debris from landfills by recycling, reusing, or donating usable materials. Council Policy 900-16 encourages businesses, organizations, and contractors to divert waste through recycling, reduction, or reuse; project proponents should divert as much waste as possible during demolition, construction, and renovation projects; diversion goals for inert materials (concrete, rock, asphalt, dirt, etc.) should be 100 percent; and businesses, organizations, and contractors should purchase products made from recycled materials to the extent feasible. Section 5.408 of CalGreen similarly requires that a minimum of 65 percent of all non-hazardous construction and demolition waste for non-residential projects be recycled and/or salvaged for reuse. Materials that are not recyclable would be taken to Miramar Landfill, which is the closest landfill to the proposed PMPU area. Therefore, because a substantial majority of the construction and demolition materials would be recycled or reused instead of being disposed of in a local landfill, construction activities for future development associated with the proposed PMPU would comply with Federal, State, and local management and reduction statutes and regulations related to solid waste. Impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Construction impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to compliance with solid waste management and reduction statute and regulations.

Construction activities under Option 1 would be required to comply with the City of San Diego's C&D Debris Deposit Ordinance and City of San Diego's Council Policy 900-16, Construction & Demolition Material Recycling for future development within the City of San Diego and with Section 5.408 of CalGreen, which mandates that projects requiring building and demolition permits pay a refundable waste diversion deposit and divert at least 65 percent of their debris from landfills by recycling, reusing, or donating usable materials. Because a substantial majority of the construction and demolition materials would be recycled or reused instead of being disposed of in a local landfill, construction activities for future development associated with Option 1 would comply with Federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, construction activities under Option 1 would result in a less-than-significant impact and would not result in any additional or more severe impacts

related to compliance with solid waste management and reduction statutes and regulations than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to compliance with solid waste management and reduction statute and regulations.

Construction activities under Option 2 would comply with the City of San Diego's C&D Debris Deposit Ordinance City of San Diego's Council Policy 900-16, Construction & Demolition Material Recycling for future development within the City of San Diego and with Section 5.408 of CalGreen, which mandates that projects requiring building and demolition permits pay a refundable waste diversion deposit and divert at least 65 percent of their debris from landfills by recycling, reusing, or donating usable materials. Because a substantial majority of the construction and demolition materials would be recycled or reused instead of being disposed of in a local landfill, construction activities for future development associated with Option 2 would comply with Federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, construction activities under Option 2 would result in a less-than-significant impact and would not result in any additional or more severe impacts related to compliance with solid waste management and reduction statutes and regulations than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, construction activities occurring under the proposed PMPU, including within PD3, would result in a less-than-significant impact related to compliance with solid waste management and reduction statute and regulations.

Construction activities under Option 3 would comply with the City of San Diego's C&D Debris Deposit Ordinance City of San Diego's Council Policy 900-16, Construction & Demolition Material Recycling for future development within the City of San Diego and with Section 5.408 of CalGreen, which mandates that projects requiring building and demolition permits pay a refundable waste diversion deposit and divert at least 65 percent of their debris from landfills by recycling, reusing, or donating usable materials. Because a substantial majority of the construction and demolition materials would be recycled or reused instead of being disposed of in a local landfill, construction activities for future development associated with Option 3 would comply with Federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, construction activities under Option 3 result in a less-than-significant impact and would not result in any additional or more severe impacts related to compliance with solid waste management and reduction statutes and regulations than buildout of the proposed PMPU without Option 3.

Operation

Operation of future development under the proposed PMPU would be required to comply with applicable solid waste regulations. As noted in Section 4.15.3, AB 939 established a solid waste diversion requirement of 50 percent by the year 2000 for all cities and counties in the State. In addition, AB 341 was enacted to further the goals of AB 939 and established a statewide goal of diverting at least 75 percent of solid waste from landfills. Future development that would generate

4 cubic yards or more of commercial solid waste per week would be required to implement recycling practices during operation in compliance with the mandatory commercial recycling program established by AB 341. Therefore, operation of the proposed PMPU would comply with State and local management and reduction statutes and regulations related to solid waste, and impacts would be less than significant.

Analysis of Options 1, 2, and 3

As discussed in Chapter 3, the Board may choose one or more of the three options within North Embarcadero Subdistrict during its deliberations on whether to approve the proposed PMPU and certify this PEIR. A choice of one or more options by the Board could replace the proposed PMPU land uses, within the geographic boundaries of the options, with different or similar land uses. Figures 3-5, 3-6, and 3-7 illustrate the locations of the options. Operations impacts associated with each of the options are analyzed below.

Option 1: Waterfront Destination Park at Foot of Navy Pier

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to compliance with solid waste management and reduction statute and regulations.

Operation of future commercial development under Option 1 that generates 4 cubic yards or more solid waste per week would comply with the mandatory recycling program established by AB 341, and operation of Option 1 would comply with State and local management and reduction statutes and regulations related to solid waste. Therefore, operations under Option 1 would be less than significant and would not result in any additional or more severe impacts related to compliance with solid waste management and reduction statutes and regulations than buildout of the proposed PMPU without Option 1.

Option 2: 205-Foot Setback East of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to compliance with solid waste management and reduction statute and regulations.

Operation of future commercial development under Option 2 that generates 4 cubic yards or more solid waste per week would comply with the mandatory recycling program established by AB 341, and operation of Option 2 would comply with State and local management and reduction statutes and regulations related to solid waste. Therefore, operations under Option 2 would be less than significant and would not result in any additional or more severe impacts related to compliance with solid waste management and reduction statutes and regulations than buildout of the proposed PMPU without Option 2.

Option 3: 205-Foot Setback West of North Harbor Drive

As discussed above, implementation of the proposed PMPU, including within PD3, would result in a less-than-significant impact related to compliance with solid waste management and reduction statute and regulations.

Operation of future commercial development under Option 3 that generates 4 cubic yards or more solid waste per week would comply with the mandatory recycling program established by

AB 341, and operation of Option 3 would comply with State and local management and reduction statutes and regulations related to solid waste. Therefore, operations under Option 3 would be less than significant and would not result in any additional or more severe impacts related to compliance with solid waste management and reduction statutes and regulations than buildout of the proposed PMPU without Option 3.

Impacts of Proposed PMPU Element Policies

Implementation of the proposed PMPU Element policies would not result in impacts related to potential conflict with State and local management and reduction statutes and regulations related to solid waste.

Impact Determination and Mitigation

Implementation of the proposed PMPU would comply with State and local management and reduction statutes and regulations related to solid waste. Impacts would be less than significant.

4.15.5 Cumulative Impact Analysis

Cumulative impacts on utilities and service systems may occur when projects combine to increase demand such that additional services must be provided or additional facilities constructed. This usually would result from the incremental addition of people permanently occupying an area or the incremental construction of new or larger buildings requiring the provision of new or expanded utilities and service systems to meet the new permanent demand.

4.15.5.1 Geographic Scope

The geographic scope of cumulative impacts for utilities and service systems is based on the Plan Method. The cumulative setting for utilities and service systems includes all of the plans and programs listed in Table 2-2 as well as the growth assumptions provided in regional planning documents such as a UWMP, which are based on the latest SANDAG growth forecasts that anticipate future growth through 2050 based on local jurisdiction's existing general plans. As such, the geographic scope for the cumulative analysis for water, wastewater, telecommunications, and solid waste is San Diego County. The geographic scope for cumulative impacts for electricity and natural gas includes the SDG&E service area, which is the entire County, and surrounding vicinity.

4.15.5.2 Cumulative Effects From Past, Present, and Probable Future Projects

As discussed in Section 4.15.2, *Existing Conditions*, water service in the proposed PMPU area is provided by the City of San Diego PUD Water Branch, which is a member agency of the San Diego County Water Authority, the wholesale water provider for the San Diego Region. In addition, Sweetwater Authority's water system provides water service to the cities of Chula Vista and National City, as well as the unincorporated community of Bonita within San Diego County. Wastewater services are provided by the Metropolitan Sewerage System with three treatment plants treating wastewater generated in the proposed PMPU area: NCWRP, SBWRP, and PLWTP.

Based on SANDAG's projections and the most recent U.S. Census, the San Diego regional population is forecast to increase from 3,095,313 persons in 2010 (U.S. Census Bureau 2010) to 4,068,759 persons in 2050 (SANDAG 2013)—an increase of 31.5 percent. Given the potential for the density and intensity of development within the geographic scope to increase under the updated regional and community plans identified in Table 2-2, as well as projected growth within the San Diego region, it is possible that demand on utilities would increase such that new or expanded utilities and service systems may be required, insufficient water supplies may be available, wastewater treatment capacity could be exceeded, or landfill capacity could be exceeded. Therefore, impacts of past, present, and future plans and programs on utilities and service systems would be cumulatively significant.

4.15.5.3 Project Contribution

PMPU impacts, including Options 1, 2, or 3, associated with the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities are anticipated to be significant and unavoidable under the proposed PMPU (**Impact-UTIL-1** even after implementation of **MM-BIO-2**, **MM-BIO-5**, **MM-BIO-8**, **MM-BIO-9**, **MM-CUL-1** through **MM-CUL-3**, **MM-GEO-1**, **MM-HAZ-1** and **MM-HAZ-2**, and **MM-WQ-1** through **MM-WQ-7**). Although implementation of mitigation measures identified in Sections 4.3, 4.4, 4.5, 4.7, and 4.8 would reduce impacts related to ground-disturbing activities that would result from construction of new or expanded utilities, it would not guarantee that impacts associated with the installation of new, upgraded, or expanded utilities facilities could be mitigated to less-than-significant levels as discussed under Sections 4.4 and 4.8. When combined with the significant cumulative impacts from past, present, and probable future projects, the project's contribution to the need for sufficient utilities facilities, the construction of which may have a significant impact on the environment, would be cumulatively considerable (**Impact-C-UTIL-1**).

During the course of the buildout of the proposed PMPU, including Options 1, 2, or 3, there may not be sufficient water supplies available to serve future development during normal, dry, and multiple dry years, which, when combined with the water demands of past, present, and probable future projects, would result in a cumulatively considerable impact under operational conditions prior to mitigation (**Impact-C-UTIL-2**). Implementation of **MM-UTIL-2** and **MM-UTIL-3** would ensure that future updates of the UWMP(s) account for the growth and associated future water demand that would occur under the proposed PMPU and, in the interim, would require future project proponents to adopt all feasible mitigation measures and to demonstrate that sufficient water supplies are available prior to project approval. In the event that sufficient water supply is not available, **MM-UTIL-3** would prohibit such development from being approved. Therefore, project-related impacts would be less than significant, and the proposed PMPU's contribution to water supply impacts would be considered less-than-cumulatively considerable after mitigation.

Implementation of the proposed PMPU, including Options 1, 2, or 3, would not result in a determination by the wastewater treatment provider that it does not have adequate capacity to serve the proposed PMPU's projected demand in addition to the provider's existing commitments and, when combined with the wastewater treatment demands of past, present, and probable future projects, would not contribute to a cumulatively considerable impact. Therefore, future development under the proposed PMPU would not contribute to insufficient wastewater treatment capacity under cumulative conditions, and the proposed PMPU's contribution to wastewater impacts would be considered less-than-cumulatively considerable.

As discussed in Section 4.15.3 above, operation of the proposed PMPU would generate 1,755 cubic yards of disposable solid waste per year. Miramar Landfill is closest to the proposed PMPU area. AB 939 requires that local county agencies must prepare and implement Integrated Waste Management Plans, which must include a Siting Element. The Siting Element is required to include a projection of the amount of disposal capacity that will be needed to accommodate the solid waste generated within the local jurisdiction for a 15-year period. Due to compliance with AB 939, solid waste facility capacity must be assessed to ensure landfills could sufficiently accommodate solid waste generated in the region. However, the additional solid waste generated from buildout of the proposed PMPU under construction and operational conditions may exceed existing landfill capacity when combined with solid waste generated by past, present, and probable future projects. This impact would be cumulatively considerable prior to mitigation (**Impact-C-UTIL-3** and **Impact-C-UTIL-4**). Implementation of **MM-C-UTIL-1** and **MM-C-UTIL-2** would ensure that future updates of the Five-Year Review Report account for the growth and associated future solid waste demand that would occur under the proposed PMPU and, in the interim, would require future development to conduct project-level analysis to ensure that adequate landfill capacity exists to serve the project. **MM-C-UTIL-1** requires demonstration of sufficient landfill capacity prior to the District's approval of the project. In the event that sufficient landfill capacity is not available, **MM-C-UTIL-2** would prohibit such development from being approved. Therefore, implementation of the proposed PMPU would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, the proposed PMPU's contribution to solid waste impacts would be considered less-than-cumulatively considerable after mitigation.

4.15.5.4 Cumulative Impact Determination and Mitigation

The proposed PMPU's incremental contribution to cumulative utilities impacts would be cumulatively considerable. Cumulatively considerable impacts include:

Impact-C-UTIL-1: Potential to Result in a Cumulatively Considerable Adverse Impact Related to the Requirement for New or Expanded Utilities. Operation of future development consistent with the proposed PMPU could increase demand on utilities serving the proposed PMPU area, including water, wastewater, stormwater, electricity, natural gas, and telecommunications, potentially requiring the relocation or construction of new or expanded utilities to serve future development and uses. While the specifications of individual future development, including timing, location, and size, are not known at this time, the potential impacts associated with installation of new or expanded utility facilities to serve specific future development are generally known and significant impacts associated with ground-disturbing activities would potentially occur. In combination with other operational activity in or adjacent to the proposed PMPU area, construction of these facilities could result in cumulatively considerable physical impacts on the environment.

Impact-C-UTIL-2: Potential to Result in Cumulatively Considerable Insufficient Water Supplies During Operation. Due to the significant increase in water demand as a result of implementation of the proposed PMPU, sufficient water supplies may not be available to serve future development under the proposed PMPU during normal, dry, and multiple dry years. Therefore, in combination with the operation of other future development in or adjacent to the proposed PMPU area, given the increase in water demand, which is necessary for operation of future development, this would result in a cumulatively considerable impact related to water supplies.

Impact-C-UTIL-3: Potential to Result in Cumulatively Considerable Adverse Impacts Related to Exceeding Capacity at Existing Landfills During Construction. Construction activities associated with future development under the proposed PMPU could produce substantial quantities of demolition debris, the disposal of which could exceed existing landfill capacity. In combination with other construction activity in or adjacent to the proposed PMPU area, this would result in a cumulatively considerable impact related to capacity at existing landfills.

Impact-C-UTIL-4: Potential to Result in Cumulatively Considerable Adverse Impacts Related to Exceeding Capacity at Existing Landfills During Operation. Operation associated with future development under the proposed PMPU could result in a substantial increase in solid waste, the disposal of which could exceed existing landfill capacity. In combination with other operational activity in or adjacent to the proposed PMPU area, this would result in a cumulatively considerable impact related to capacity at existing landfills.

Mitigation Measures

For **Impact-C-UTIL-1:**

Implement **MM-BIO-2, MM-BIO-5, MM-BIO-8, MM-BIO-9, MM-CUL-1 through MM-CUL-3, MM-GEO-1, MM-HAZ-1, MM-HAZ-2, and MM-WQ-1 through MM-WQ-7**, as described under Threshold 1 above.

For **Impact-C-UTIL-2:**

Implement **MM-UTIL-1, MM-UTIL-2, and MM-UTIL-3**, as described under Threshold 1 above.

For **Impact-C-UTIL-3 and Impact-C-UTIL-4:**

MM-C-UTIL-1: Update the Five-Year Review Report with New Growth Projections. Within 6 months of the California Coastal Commission's certification of the proposed PMPU, the District shall provide the County of San Diego with amended growth assumptions and changes to water and land use designations associated with the proposed PMPU. The District shall coordinate with County of San Diego Local Enforcement Agency to ensure the Five-Year Review Report is updated as part of the next soonest revision cycle to reflect the updated growth assumptions of the proposed PMPU. Until the Five-Year Review Report is updated to account for projects proposed under a certified PMPU, the District shall implement **MM-C-UTIL-2** to ensure sufficient landfill capacity exists for individual projects.

MM-C-UTIL-2: Conduct Site-Specific Environmental Review to Assess Landfill Capacity and Implement Measures to Reduce Solid Waste. Prior to implementation of **MM-C-UTIL-1**, during site-specific environmental review for future development occurring under the proposed PMPU, the District shall assess the capacity of existing landfills serving the project site during construction and operation. Project proponents shall incorporate measures that reduce a project's solid waste, including, but not limited to, compliance with the City of San Diego's Recycling Ordinance, which requires 50 percent of solid waste to be recycled, and the City of San Diego's Construction and Demolition Debris Deposit Ordinance, which would require 65 percent of all construction and demolition debris be recycled. In addition, the District shall encourage project proponents to use recycled, regional, and rapidly renewable materials during construction. The District shall not approve any future development proposals unless the

project proponent can demonstrate sufficient landfill capacity is available to meet the project's solid waste demands.

Level of Significance After Mitigation

As discussed above, implementation of **MM-BIO-2**, **MM-BIO-5**, **MM-BIO-8**, **MM-BIO-9**, **MM-CUL-1** through **MM-CUL-3**, **MM-GEO-1**, **MM-HAZ-1**, **MM-HAZ-2**, and **MM-WQ-1** through **MM-WQ-7** would reduce impacts from ground-disturbing activities that could result from construction activities associated with new or expanded utilities. However, because these mitigation measures would not reduce all ground-disturbing impacts to a level below significance, including impacts on cultural resources and water quality, **Impact-C-UTIL-1** would be cumulatively considerable and unavoidable.

Implementation of **MM-UTIL-1** and **MM-C-UTIL-1** would require the District to coordinate with the appropriate agencies to ensure that growth under the proposed PMPU would be accounted for during the next UWMP and Five-Year Review Report updates, and, in the interim, **MM-UTIL-2** and **MM-C-UTIL-2** would require project-specific analyses to determine if future development occurring under the proposed PMPU would exceed available water supplies or landfill capacity, respectively. **MM-UTIL-3** would implement water conserving design features to reduce the water demand of future development projects. Because these mitigation measures would require implementation of strategies for water conservation and solid waste reduction, they would reduce the demand of future development on these utilities. In addition, these mitigation measures stipulate that, if it cannot be demonstrated that sufficient water supplies or landfill capacity exist to serve a project, the District cannot approve that project. Therefore, these measures would reduce impacts related to water supply and landfill capacity to less-than-significant levels, which would reduce the proposed PMPU's contribution to **Impact-C-UTIL-2**, **Impact-C-UTIL-3**, and **Impact-C-UTIL-4** to less than cumulatively considerable.

Chapter 5

Additional Consequences of PMPU Implementation

5.1 Introduction

This chapter addresses the potential additional consequences associated with the proposed Port Master Plan Update (PMPU), as required pursuant to California Environmental Quality Act (CEQA) Guidelines Sections 15126, 15126.2¹ (b), (c), (d), (e), and 15128. Specifically, this chapter (1) identifies any significant irreversible changes to the environment that would result from PMPU implementation; (2) discusses growth-inducing impacts of the proposed PMPU, which pertain to ways in which the PMPU could promote either direct or indirect growth; and (3) describes the proposed PMPU's environmental effects that were determined not to be significant during the initial environmental review process.

5.2 Significant Irreversible Environmental Changes

The PMPU would involve adoption of a plan and, therefore, pursuant to State CEQA Guidelines Section 15127, the Program Environmental Impact Report (PEIR) is required to comply with State CEQA Guidelines Section 15126.2(d). Section 15126.2(d) requires that the PEIR identify any significant irreversible environmental changes resulting from implementation of the PMPU.

The PMPU consists of a comprehensive update to the current Port Master Plan (PMP), which will implement the 30-year planning vision of the San Diego Unified Port District (District). The PMPU does not propose any specific development project; however, future development activities allowed under the proposed PMPU would result in significant irreversible environmental changes. The demolition of existing waterside and landside uses, such as piers, docks, structures, and buildings, to accommodate future PMPU-related development would be an irreversible change. Implementation of the PMPU would also require a permanent commitment of non-renewable natural resources primarily from the direct consumption of fossil fuels. These fossil fuels would be consumed during both construction and operation of future PMPU-related projects in the form of diesel and gasoline used in construction equipment, commute vehicles, trucks, and vessels. Electricity would also be consumed during construction and operation of future projects from power tools, electric equipment, and lighting, although not all electricity would be from non-renewable sources. The portion generated from fossil fuels such as natural gas, however, would be irretrievable and irreversible. The materials that would be used during construction and operational activities associated with future PMPU-related projects would be unavailable for other uses.

¹ The requirements of State CEQA Guidelines Section 15126.2(a) and (c) are met in Chapter 4, *Environmental Analysis*, under each resource discussion. Additionally, the requirements of State CEQA Guidelines Section 15126.2(b) are met in Section 4.15, *Utilities and Service Systems*.

5.3 Growth-Inducing Impacts

State CEQA Guidelines Section 15126.2(e) requires that an EIR discuss the ways in which a proposed project could directly or indirectly foster economic development, population growth, or additional housing, and how that growth would affect the surrounding environment. Direct growth inducement would result if a project, for example, involved construction of new housing. Indirect growth might occur if a project were to establish substantial new permanent employment opportunities that would stimulate the need for additional housing, utilities, and public services.

Similarly, a project would indirectly induce growth if it would remove an obstacle to additional development, such as removing a constraint on a required public service or utility. A project proposing to expand water supply capabilities in an area where limited water supply has historically restrained growth would be considered growth-inducing.

This section discusses the characteristics and consequences of the proposed PMPU that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. However, the following analysis does not assume that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment (State CEQA Guidelines 15126.2(e)). Rather, Chapter 4, *Environmental Analysis*, analyzes the potential adverse impacts on resources resulting from the PMPU, including any that would be caused by cumulative conditions. A detailed discussion of growth-inducing impacts is included in Section 4.11, *Population and Housing*, under Section 4.11.4.4.

5.3.1 Foster Economic Growth

One criterion by which growth inducement can be measured involves economic growth. Economic growth considerations range from a demand for temporary and permanent employees, to an increase in the overall revenue base for an area, to a new demand for supporting services such as retail, restaurant, and entertainment uses.²

The PMPU would foster growth through three primary means: (1) the creation of new jobs, (2) an increase in business and tax revenues, and (3) an increase in the demand for supporting services.

5.3.1.1 Economic Growth through New Jobs

Employment opportunities in the PMPU area include jobs in hospitality, retail, industrial, and commercial industries. Commercial recreation-oriented businesses provide full- and part-time employment opportunities in construction, warehousing, trucking, custodial, and personal services, all of which contribute to the economic base of the region (District 2017). Industrial uses at the Port support cargo and goods movement, ship building and repair, and other similar maritime-related industries and businesses. The PMPU would provide objectives and policies, including designating allowable water and land uses on District Tidelands. As such, the construction of future commercial visitor-serving uses within the PMPU area, such as hotels, restaurants, and retail, is reasonably foreseeable. Economic growth could occur as these new visitor-serving businesses are established or existing businesses expand, creating new sources of employment. As discussed in Section 4.11, buildout of the PMPU would generate approximately 10,400 new jobs. Additionally, the PMPU

² Residential uses are not allowed on District Tidelands per the San Diego Unified Port District Act.

includes several goals, objectives, and policies within the Economics Element that promote economic and employment growth within the Port.

As such, the PMPU would create new employment opportunities and ultimately would contribute to economic growth of the San Diego region.

5.3.1.2 Economic Growth through Increased Business and Tax Revenues

Buildout of the PMPU would result in new and/or expanded visitor-serving and commercial recreation-oriented businesses within the Port. These uses are expected to attract patrons that would spur economic growth in the form of increased revenue and a demand for related services (e.g., hotel rooms, restaurants, and retail) in the Port and greater San Diego area. As such, development of future water and land uses associated with the PMPU would result in an increase in business and local sales tax. In addition, increases in maritime activity at the waterfront terminals would generate additional funds from tariffs and leases. This increase in yearly revenue could spur additional growth in other areas because it would provide the District and its member cities with additional funds on a yearly basis. Therefore, the PMPU would stimulate economic growth through increased business and tax revenues.

5.3.1.3 Economic Growth through Increased Demand for Supporting Services

As mentioned, new and/or expanded businesses resulting from buildout of the PMPU are expected to attract patrons that would spur economic growth in the form of increased demand for supporting services such as hotels, restaurants, and retail. Additionally, the PMPU includes policies that promote economic growth within the Port, such as the following:

ECON Policy 2.3.14 The District shall promote and support the commercial fishing industry and its longevity as a priority coastal-dependent use and economic contributor to Tidelands, the region, and California through such efforts as joint public-private marketing, fishing-related festivals, and other fishing events and activities.

ECON Policy 2.4.4 The District shall promote and support a diversified hotel portfolio and corresponding elements of the hospitality industry and encourage their expansion.

ECON Policy 2.5.1 The District shall promote established and emerging coastal-dependent commercial and industrial sectors throughout Tidelands and may choose to promote through joint marketing campaigns and participation in conferences or other business development programs.

Therefore, the PMPU would stimulate additional economic growth as a result of the increase in demand for supporting services.

5.3.2 Population Growth and Housing

The Public Trust Doctrine restricts the type of land uses allowed on public lands, including District Tidelands. Under the Public Trust Doctrine, residential uses are prohibited on District property. As such, the PMPU would not allow for the construction of housing within the District. The PMPU would, however, result in the creation of both temporary and permanent employment opportunities

to support the construction and operation of future development associated with the PMPU. Consequently, while the PMPU would not result in the direct construction of additional housing, it may result in the indirect construction of housing outside of District's jurisdiction. Therefore, the PMPU may indirectly stimulate the construction of some housing due to the increase in permanent jobs.

5.3.3 Removal of Obstacles to Population Growth

As stated above, a project would indirectly induce growth if it would remove a constraint on a required public service or utility. A project would also indirectly induce growth if it would establish a precedent-setting action (e.g., an innovation, a change in zoning, a general plan amendment approval). The PMPU consists of a comprehensive update to the current PMP to guide land and water uses, as well as future development on District Tidelands. While the PMPU does not propose any physical development, including infrastructure improvements, it would facilitate future growth and development within the Port that could require infrastructure upgrades and result in the removal of obstacles to growth.

5.4 Effects Found Not to Be Significant

Pursuant to State CEQA Guidelines Section 15063, the District prepared an Initial Study that determined that one or more effects related to agriculture and forestry resources; geology and soils; hazards and hazardous materials; hydrology and water quality; mineral resources; noise and vibration; population and housing; transportation, circulation, and parking; and wildfire would not be significant. In accordance with State CEQA Guidelines Section 15128, a brief explanation indicating the reasons that the effects on these resources would not be significant is provided under each subheading below.

5.4.1 Agriculture and Forestry Resources

5.4.1.1 Conversion of Important Farmland

The PMPU area is entirely urbanized and there are no farmlands or agricultural resources. According to the Farmland Mapping and Monitoring Program of the California Department of Conservation (DOC 2017), the landside portion of the PMPU area is classified as Urban and Built-Up Land and does not contain any Prime Farmland or Farmland of Statewide Importance. As such, there is no potential for future activities associated with the PMPU to convert agricultural resources to nonagricultural uses. No impact would occur.

5.4.1.2 Agricultural Zoning or Williamson Act Contracts

The PMPU area is entirely urbanized and there are no farmlands or agricultural resources. The landside portion of the PMPU area is classified as Urban and Built-Up Land, and there are no parcels within the PMPU area zoned for agricultural use or under Williamson Act contract (DOC 2013). Therefore, the PMPU would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

5.4.1.3 Conflicts with Forestland Zoning, Timberland Zoning, or Timberland Production

The PMPU area is entirely urbanized and does not support any forestry uses. No land that has been zoned as forest land or timberland exists within the boundaries of the PMPU area. Therefore, future activities associated with the PMPU would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. No impact would occur.

5.4.1.4 Loss or Conversion of Forestland

The PMPU area does not contain any forest lands as defined in Public Resources Code Section 12220(g). California's Forests and Rangelands: 2010 Assessment, completed as part of the California Department of Forestry and Fire Protection Fire Resource Assessment Program, provides an assessment of the State's inventory of forest land and identifies lands within the PMPU area as Urban (CAL FIRE 2010). Therefore, the PMPU would not result in a loss of forestland or the conversion of forestland to other uses. No impact would occur.

5.4.1.5 Other Changes Resulting in Conversion of Farmland or Forestland

No agricultural land, forestland, or timberland exists within or near the PMPU area. Future activities associated with the PMPU would not result in the conversion of important farmland or other agricultural resources to a non-agricultural use or from forestland to non-forest use because the PMPU area is developed land that is used for commercial and recreational purposes in accordance with the Public Trust Doctrine. Therefore, the PMPU would not involve a change to the existing environment that, because of its location or nature, would result in the conversion of Farmland to non-agricultural use or Forestland to non-forest use, and no impact would occur.

5.4.2 Geology and Soils

5.4.2.1 Landslides

Landslide activity generally occurs in areas that lack vegetation and have steep slopes. The PMPU area primarily consists of fill areas that are flat. According to the California Geological Survey (2011), the PMPU area has a low potential for landslides to occur. According to the City of San Diego Seismic Safety Study (2008a), there are two areas within Point Loma where historic landslides have occurred; however, these areas are not located within or adjacent to the PMPU area. Therefore, no portion of the PMPU area would be susceptible to landslides, nor would future activities associated with the PMPU exacerbate the potential for landslides to occur. No impact would occur.

5.4.2.2 Septic Tanks or Alternative Wastewater Disposal Systems

The entire PMPU area is urbanized and has sewer service. No septic tanks or alternative wastewater disposal systems would be required for any future projects associated with the PMPU. Therefore, no impact would occur.

5.4.3 Hazards and Hazardous Materials

5.4.3.1 Private Airstrips

The PMPU area is not located within the vicinity of a private airstrip.³ Therefore, future activities associated with the PMPU would not result in any safety hazards related to private airstrips for people working in the PMPU area. No impact would occur.

5.4.3.2 Wildland Fire Hazards

State law requires that all local jurisdictions identify very high fire hazard severity zones (VHFHSZs) within their areas of responsibility (California Government Code, Section 51175–51189). Inclusion within these zones is based on vegetation density, slope severity, and other relevant factors that contribute to fire severity. According to the VHFHSZ Maps (CAL FIRE 2009), the PMPU area is entirely within a “non-VHFSZ.” The PMPU area is located in and around San Diego Bay and is primarily developed. There are no wildlands or heavily vegetated areas near the PMPU area; therefore, subsequent projects implemented under the PMPU would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, nor would they exacerbate the potential for wildland fires to occur. No impacts would occur.

5.4.4 Hydrology and Water Quality

5.4.4.1 100-Year Flood Hazard Areas (Placement of Housing)

The PMPU area includes several portions of the 100-year floodplain, as designated on Flood Insurance Rate Maps (Federal Emergency Management Agency 2012). However, pursuant to the San Diego Unified Port District Act (Port Act) and Public Trust Doctrine, no housing is allowed within the PMPU area. Therefore, the PMPU would not place housing within a 100-year flood hazard area, and no impact would occur.

5.4.4.2 Dam or Levee Failure

Dam failures are rated as a low-probability, high-loss event. Only two major dam failures have been recorded in San Diego County. These occurred in 1916 and were caused by a flood event (County of San Diego 2010). A portion of the PMPU area is located within a mapped dam inundation zone (California Office of Emergency Services 2003). The majority of the southernmost portion of the Bay, which encompasses the South Bay Planning District, would be subject to inundation if the Upper and Lower Otay Dams were to fail.⁴

The following information is based on geographic information system (GIS) data from the San Diego County Office of Emergency Services (2015). The Upper and Lower Otay Dams are approximately 10 miles to the east of the PMPU area, and inundation is projected to occur in the PMPU area within approximately 33 minutes if the dams were to fail. The City of San Diego operates the Upper and

³ While not a private airstrip or public airport, Naval Air Station North Island is considered in Chapter 4, *Environmental Analysis*, under “public airports” to reduce redundancy in the analysis.

⁴ A portion of the National City Bayfront Planning District near Civic Center Drive and the Chula Vista Bayfront Planning District are located within a mapped dam inundation zone (California Office of Emergency Services 2003). However, neither of these are part of the proposed PMPU.

Lower Otay Reservoirs. The reservoirs have spilled over on a few occasions in the past 10 years, but no downstream flooding has occurred (KPBS 2017).

However, as the dams are not within the vicinity of the PMPU area, there are no uses that could be proposed under the PMPU that would be expected to interfere with the dams or otherwise contribute to the potential failure of the dam. Therefore, the PMPU would not cause or otherwise exacerbate the failure of a dam or levee that could expose people or structures to a significant risk of loss, injury, or death involving flooding. Impacts would be less than significant.

5.4.5 Mineral Resources

5.4.5.1 Loss of Regional or State Valued Mineral Resources

The Surface Mining and Reclamation Act of 1975 required the State Geologist to initiate mineral land classification to help identify and protect mineral resources in areas within the state. In accordance with guidelines established by the State Mining and Geology Board, mineral deposits in western San Diego County have been classified into Mineral Resource Zones. The PMPU area does not contain aggregate resources and is not located in a zone that contains important resources, as shown in Figure CE-6 of the Conservation Element of the City of San Diego General Plan (City of San Diego 2008b). The PMPU area is not designated or zoned as land with available mineral resources.

Per the Conservation Element of the City of San Diego General Plan, however, the South San Diego Bay Unit of the San Diego National Wildlife Refuge supports salt production (South Bay Planning District). A commercial salt facility consisting of a series of diked ponds operates in the refuge, which concentrates and precipitates salts from the bay waters. While these salt ponds are a locally unique industry, they do not comprise a large share of the salt production market (City of San Diego 2008b). Additionally, the PMPU does not propose any changes to the South Bay Planning District that would affect the existing operations at the salt ponds. Therefore, the PMPU would not result in the loss of known mineral resources of value to the region or state. No impact would occur.

5.4.5.2 Loss of Locally Important Mineral Resources

The PMPU area is not designated for mineral extraction. The PMPU area and surrounding area do not contain locally important mineral resources. While the South Bay Planning District contains a locally unique commercial salt operation, the facility does not comprise a large share of the salt production market. Additionally, the PMPU does not propose any changes to the South Bay Planning District that would affect the existing operations at the salt ponds. Therefore, the PMPU would not result in the loss of availability of a locally important mineral resource recovery site. No impact would occur.

5.4.6 Noise and Vibration

5.4.6.1 Private Airstrips

The PMPU area is not located within the vicinity of a private airstrip. Therefore, future activities associated with the PMPU would not expose people working in the PMPU area to excessive noise from private airstrips. No impact would occur.

5.4.7 Population and Housing

5.4.7.1 Displacement of Housing

There are no residential uses or housing units present within the PMPU area. Under the Public Trust Doctrine, the types of land uses allowed on public lands are restricted, including those within the District's jurisdiction. The Public Trust Doctrine limits the uses of sovereign lands to waterborne commerce, navigation, fisheries, open space, water-oriented recreation, ecological habitat protection, or other recognized public trust purposes. Therefore, because residential uses are not an allowable use on public lands in accordance with the Public Trust Doctrine, future activities associated with the PMPU would not result in the displacement or loss of existing residential units, and no replacement housing would be necessary. Consequently, no impact would occur.

5.4.7.2 Displacement of People

As mentioned, the PMPU area does not contain any residential uses, as the Public Trust Doctrine restricts the types of uses on public lands to waterborne commerce, navigation, fisheries, open space, water-oriented recreation, ecological habitat protection, or other recognized public trust purposes. Therefore, because no residential uses are located within the PMPU area, future activities associated with the PMPU would not result in the displacement of people, necessitating the construction of replacement housing elsewhere. Consequently, no impact would occur.

5.4.8 Transportation, Circulation, and Parking

5.4.8.1 Congestion Management Programs

Federal Highway Administration 23 Code of Federal Regulations (CFR) 450.320 requires that each transportation management area (TMA) address congestion management through a process involving an analysis of multimodal metropolitan wide strategies that are cooperatively developed to foster safety and integrated management of new and existing transportation facilities eligible for federal funding. The San Diego Association of Governments (SANDAG) has been designated as the TMA for the San Diego region. San Diego Forward: The Regional Plan, the region's long-range transportation plan and sustainable communities strategy, meets the requirements of 23 CFR 450.320 by incorporating the following federal congestion management process: performance monitoring and measurement of the regional transportation system, multimodal alternatives and non-single occupancy vehicle analysis, land use impact analysis, the provision of congestion management tools, and integration with the Regional Transportation Improvement Program process.

California State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP). The requirements within the State CMP were developed to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates for the state CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by 23 CFR 450.320 to ensure the region's continued compliance with the Federal congestion management process. Therefore, the PMPU would have no impact on an applicable CMP.

5.4.9 Wildfire

5.4.9.1 Emergency Response and Evacuation Plans

According to the VHFHSZ Maps (CAL FIRE 2009), the PMPU area is entirely within a “non-VHFSZ” under local responsibility. The PMPU area is located in and around San Diego Bay and is primarily developed. Therefore, because the PMPU area is not within an area susceptible to wildfires, subsequent projects implemented under the PMPU would not substantially interfere with an adopted emergency response or evacuation plan for wildfires. No impact would occur.

5.4.9.2 Pollutant Concentrations

As mentioned, the PMPU area is entirely within a “non-VHFSZ” under local responsibility. The PMPU area is located in and around San Diego Bay and is primarily developed. There are no wildlands or heavily vegetated areas near the PMPU area; therefore, subsequent projects implemented under the PMPU would not exacerbate the potential for wildfires to occur that could expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire. No impact would occur.

5.4.9.3 Infrastructure and Wildfire Risk

While the PMPU does not propose any physical development, including infrastructure improvements, it would facilitate future growth and development within the Port that could require new infrastructure. However, the PMPU area is entirely within a “non-VHFSZ” under local responsibility, and no wildlands or heavily vegetated areas are present within the PMPU area. Therefore, because the PMPU area is not within an area susceptible to wildfires, any infrastructure improvements to serve subsequent projects implemented under the PMPU would not have the potential to exacerbate wildfire risk. No impact would occur.

5.4.9.4 Post-Wildfire Hazards

As mentioned, the PMPU area is entirely within a “non-VHFSZ” under local responsibility and is not characterized as an area susceptible to wildfires. As such, buildout of the PMPU would not expose people or structures to significant post-wildfire risks, including downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Therefore, no impact would occur.

6.1 Overview

This chapter describes and analyzes a range of reasonable alternatives that could feasibly attain most of the basic project objectives while avoiding or substantially lessening one or more of the significant effects of the proposed Port Master Plan Update (PMPU). The primary purpose of this chapter is to ensure that the comparative analysis provides sufficient detail to foster informed decision-making and public participation in the environmental process.

Five alternatives to the proposed PMPU are analyzed in this chapter and discussed in terms of their characteristics relative to the proposed PMPU.

- Alternative 1 – No Project Alternative
- Alternative 2 – One-Third Reduced Growth Alternative
- Alternative 3 – One-Half Reduced Growth Alternative
- Alternative 4 – Harbor Island Centralized Commercial Recreation Alternative
- Alternative 5 – Recreation Open Space Alternative

Based on the analysis below, Alternative 3, the One-Half Reduced Growth Alternative, would be the environmentally superior alternative.

6.2 Requirements for Alternatives Analysis

The California Environmental Quality Act (CEQA) Guidelines require that an environmental impact report (EIR) present a range of reasonable alternatives to a project, or to the location of a project, that could feasibly attain a majority of the basic project objectives, and that would avoid or substantially lessen one or more significant environmental impacts of the project. The range of alternatives required in an EIR is governed by a “rule of reason” that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice. An EIR need not consider every conceivable alternative to a project. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the basic project objectives, are not feasible, or do not avoid or substantially lessen any significant environmental effects (State CEQA Guidelines, Section 15126.6(c)).

In addition to the requirements described above, CEQA requires the evaluation of a No Project Alternative, which analyzes the environmental effects that would occur if the project did not proceed (State CEQA Guidelines Section 15126.6(e)). Moreover, the EIR is required to identify the environmentally superior alternative. If the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative among the other alternatives (State CEQA Guidelines Section 15126.6(e)(2)).

6.3 Selection of Alternatives

In developing alternatives that meet the requirements of CEQA, the starting point is the project's objectives. The following objectives have been identified for the proposed PMPU.

1. Create an integrated vision for the District that governs the use, design, and improvement of public trust lands in accordance with Section 30711 of the California Coastal Act (CCA), the Public Trust Doctrine, and the San Diego Unified Port District Act (Port Act).
2. Within the PMPU area, create standards for new development, which serve to: 1) enhance and blend development with the surrounding character; 2) provide a balanced and diverse range of complementary uses; and 3) provide enough activation year-round and during the day-time for visitors to minimize the seasonally-related downtimes of uses on Tidelands.
3. Streamline the project review and entitlement process for implementation of the Port Master Plan.
4. Allow for an intensity and diversity of development that provides on-going and sustainable revenues to the District to ensure the longevity of the District's operations and its ability to fulfill its legislative responsibilities; balance the future needs of the maritime industry, tourism, water and land recreation; and reinvestment in critical infrastructure and maintenance of waterfront amenities and facilities as required by the Port Act and Public Trust Doctrine.
5. Provide an interconnected mobility network that encourages a range of travel modes, including the expansion of water- and land-based transit opportunities to support the movement of people, goods, and military operations.
6. Enliven the public realm by providing and maintaining recreation open space opportunities, through the creation and maintenance of: 1) public accessways; 2) physical and visual access to the water; and 3) an interconnected open space network.
7. Provide opportunities for creating a vibrant waterfront destination with a range of attractions for visitors, while protecting and restoring the environment through the proactive management of sensitive biological resources and ensuring coastal access around San Diego Bay.

CEQA also requires that alternatives be potentially feasible and could feasibly accomplish most of the basic objectives of the project. Feasible is defined in CEQA as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (Public Resources Code Section 21061.1). The State CEQA Guidelines indicate that factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, other plans or regulatory limitations, jurisdictional boundaries and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (State CEQA Guidelines Section 15126.6).

Finally, the alternatives should also avoid or substantially lessen one or more significant environmental impacts that would occur under the proposed project. Table 6-1 summarizes the proposed PMPU's significant impacts, which have been identified to assist with focusing the analysis of alternatives in Section 6.5. Unless otherwise indicated, impacts identified for the proposed PMPU would also occur under Options 1, 2, and 3.

Table 6-1. Summary of Significant Effects of the Proposed PMPU

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Section 4.1, Aesthetics and Visual Resources		
Impact-AES-1: Potential to Interfere with Designated Scenic Vista Areas or View Corridors During Construction Associated with Implementation of the Proposed PMPU	X	
Impact-AES-2: Potential to Result in Substantial Degradation of Visual Character and Quality During Construction Associated with Implementation of the Proposed PMPU.	X	
Impact-AES-3: New Permanent Source of Glare Generated by Potential High-Rise Development		X
Impact-C-AES-1: Potential to Result in Cumulatively Considerable Adverse Impacts on Scenic Vista Areas or View Corridors During Construction	X	
Impact-C-AES-2: Potential to Result in Cumulatively Considerable Substantial Degradation of Visual Character and Quality During Construction	X	
Impact-C-AES-3: Potential to Result in a Cumulatively Considerable New Permanent Source of Glare Generated by Potential High-Rise Development		X
Section 4.2, Air Quality and Health Risk		
Impact-AQ-1: New Land Use Designations Not Accounted for in the RAQS and SIP		X
Impact-AQ-2: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Construction		X
Impact-AQ-3: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Operations	X	
Impact-AQ-4: Health Effects During PMPU Buildout Construction from ROG and NO _x		X
Impact-AQ-5: Health Effects During PMPU Buildout Operations from ROG, NO _x , and CO	X	
Impact-C-AQ-1: New Land Use Designations Not Accounted for in the RAQS and SIP		X
Impact-C-AQ-2: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Construction		X
Impact-C-AQ-3: Emissions in Excess of Criteria Pollutant Thresholds During PMPU Buildout Operations	X	
Impact-C-AQ-4: Health Effects During PMPU Buildout Construction from ROG and NO _x Emissions		X
Impact-C-AQ-5 Health Effects During PMPU Buildout Operations from ROG, NO _x , and CO	X	

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Section 4.3, Biological Resources		
Impact-BIO-1: In-Water Construction-Induced Noise Impacts Disrupting Foraging Behavior of Sensitive Avian Species such as California Least Tern and California Brown Pelican		X
Impact-BIO-2: Construction Noise Impacts on Nesting Behavior of Marine Dependent Species Protected under the Migratory Bird Treaty Act and California Fish and Game Code		X
Impact-BIO-3: In-Water Pile Driving Activity Could Generate Noise Levels that Could Injure (Level A Harassment) or Alter the Behavior of (Level B Harassment) Marine Mammals, Green Sea Turtles, and Fishes		X
Impact-BIO-4: Increased Water Turbidity from Disturbance of Submerged Sediments During In-Water Construction Would Limit the Ability of Protected Fish-Foraging Avian Species to Locate Prey and Could Disrupt Eelgrass Productivity		X
Impact-BIO-5: Potential Disturbance or Destruction of Nests Protected by the ESA and/or CESA, Migratory Bird Treaty Act, and California Fish and Game Code		X
Impact-BIO-6: Aquaculture-Raised Shellfish Could Impact Essential Fish Habitat through Reduction of Available Plankton and Organic Particles and Changes to the Benthic Environment		X
Impact-BIO-7: Permanent and Long-Term Overwater Coverage from Introduction of New Structures		X
Impact-BIO-8: Raptors and Other Large Predatory Birds Using Newly Constructed Structures as Perches to Hunt Protected Avian Species in their Nesting Habitats		X
Impact-BIO-9: Bird Strikes Resulting from Use of Reflective Materials		X
Impact-BIO-10: Temporary Water Quality and Sedimentation Impacts to Eelgrass Beds During Project Construction		X
Impact-BIO-11: Permanent Overwater Shading of Eelgrass Beds by Newly Constructed Structures		X
Impact-BIO-12: Direct Loss of Eelgrass from Dredging Activities		X
Impact-BIO-13: Permanent Alteration of Bay Water Hydrodynamics due to the Placement of Pile Clusters		X
Impact-BIO-14: Reduction in the Ecological Value of Benthic Communities from Increased Depths Created by Dredging Activities		
Impact-BIO-15: Potential for Future Projects to Result in a Conflict with the Integrated Natural Resources Management Plan		X
Impact-BIO-C-1: Cumulative Impacts of In-Water Construction-Induced Noise Impacts Disrupting Foraging Behavior of Sensitive Avian Species such as California Least Tern and California Brown Pelican		X

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Impact-C-BIO-2: Cumulative Impacts of Construction Noise Impacts on Nesting Behavior of Marine Dependent Species Protected under the Migratory Bird Treaty Act and California Fish and Game Code		X
Impact-C-BIO-3: Cumulative In-Water Pile Driving Activity Could Generate Noise Levels that Could Injure (Level A Harassment) or Alter the Behavior of (Level B Harassment) Marine Mammals, Green Sea Turtles, and Fishes		X
Impact-C-BIO-4: Cumulative Impacts of Increased Water Turbidity from Disturbance of Submerged Sediments During In-Water Construction Would Limit the Ability of Protected Fish-Foraging Avian Species to Locate Prey and Could Disrupt Eelgrass Productivity		X
Impact-C-BIO-5: Cumulative Impacts of Disturbance or Destruction of Nests Protected by the ESA and/or CESA, Migratory Bird Treaty Act, and California Fish and Game Code		X
Impact-C-BIO-6: Cumulative Impacts of Aquaculture-Raised Shellfish Could Impact Essential Fish Habitat through Reduction of Available Plankton and Organic Particles and Changes to the Benthic Environment.		X
Impact-C-BIO-7: Cumulative Impacts of Permanent and Long-Term Overwater Coverage from Introduction of New Structures		X
Impact-C-BIO-8: Cumulative Impacts of Raptors and Other Large Predatory Birds Using Newly Constructed Structures as Perches to Hunt Protected Avian Species in their Nesting Habitats		X
Impact-C-BIO-9: Cumulative Impacts of Bird Strikes Resulting from Use of Reflective Materials.		X
Impact-C-BIO-10: Cumulative Impacts of Temporary Water Quality and Sedimentation Impacts to Eelgrass Beds During Project Construction		X
Impact-C-BIO-11: Cumulative Impacts of Permanent Overwater Shading of Eelgrass Beds by Newly Constructed Structures		X
Impact-C-BIO-12: Cumulative Impacts of Direct Loss of Eelgrass from Dredging Activities		X
Impact-C- BIO-13: Cumulative Impacts of Permanent Alteration of Bay Water Hydrodynamics due to the Placement of Pile Clusters		X
Impact-C-BIO-14: Cumulative Impacts of Reduction in the Ecological Value of Benthic Communities from Increased Depths Created by Dredging Activities		X
Impact-C- BIO-15: Cumulative Impacts of Future Projects to Result in a Conflict with the Integrated Natural Resources Management Plan		X

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Section 4.4, Cultural Resources and Tribal Cultural Resources		
Impact CUL-1: Future Construction Activities within the Proposed PMPU Area May Adversely Impact Current and Future Significant Historical Resources.	X	
Impact-CUL-2: Future Ground Disturbing Activities within the Proposed PMPU Area May Adversely Impact Archaeological Resources that are Historical Resources or Unique Archaeological Resources.	X	
Impact-CUL-3: Future Ground Disturbing Activities Within the Proposed PMPU Area May Adversely Impact Tribal Cultural Resources	X	
Impact-C-CUL-1: Future Construction Activities Within the Proposed PMPU Area Could Result in a Cumulatively Considerable Contribution to Adverse Impacts on Significant Historical Resources	X	
Impact-C-CUL-2: Future Ground-Disturbing Activities Within the Proposed PMPU Area Could Result in a Cumulatively Considerable Contribution to Adverse Impacts on Archaeological Resources that are Historical Resources or Unique Archaeological Resources	X	
Impact-C-CUL-3: Future Ground-Disturbing Activities Within the Proposed PMPU Area Could Result in a Cumulatively Considerable Contribution to Adverse Impacts on Tribal Cultural Resources	X	
Section 4.5, Geology and Soils		
Impact-GEO-1: Future Construction Activities within PD 1, PD 3, PD 8, PD 9, and PD 10 May Adversely Impact Unique Paleontological Resources		X
Impact-C-GEO-1: Future Construction Activities Within PD1, PD3, PD8, PD9, and PD10, Combined with Probable Future Projects, May Cumulatively Impact Unique Paleontological Resources		X
Section 4.6, Greenhouse Gas Emissions and Energy		
Impact-GHG-1: Inconsistency with the Statewide Reduction Target for 2030 (Project-Adjusted) and Goal for 2050	X	
Impact-GHG-2: Conflict with Plans, Policies, and Regulations Adopted to Reduce GHG Emissions		X
Impact-EN-1: Potential Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources		X
Impact-EN-2: Potential Inconsistency with Applicable Energy Use Reduction Plans		X
Impact-C-GHG-1: Inconsistency with the Statewide Reduction Targets for 2030 and 2050		X
Impact-C-GHG-2: Conflict with Plans, Policies, and Regulations		X
Impact-C-EN-1: Potential Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources		X

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Impact-C-EN-2: Potential Inconsistency with Applicable Energy Use Reduction Plans		X
Section 4.7, Hazards and Hazardous Materials		
Impact-HAZ-1: Possible Onsite Contamination		X
Impact-HAZ-2: Potential to Encounter Undocumented Contamination During Reasonably Foreseeable Construction Activities		X
Impact-HAZ-3: Potential to Encounter Lead or Organochlorine Pesticides in Soil During Reasonably Foreseeable Construction Activities		X
Impact-HAZ-4: Potential to Encounter Contamination Onsite Due to Listing on a Hazardous Materials Database		X
Impact C-HAZ-1: Cumulatively Considerable Impact from Possible Onsite Contamination		X
Impact-C-HAZ-2: Cumulatively Considerable Impact from Potential to Encounter Undocumented Contamination During Reasonably Foreseeable Construction Activities		X
Impact-C-HAZ-3: Cumulatively Considerable Impact from Potential to Encounter Lead or Organochlorine Pesticides in Soil During Reasonably Foreseeable Construction Activities		X
Impact-C-HAZ-4: Cumulatively Considerable Impact from Potential to Encounter Contamination Onsite Due to Listing on a Hazardous Materials Database		X
Section 4.8, Hydrology and Water Quality		
Impact-WQ-1: Disturbance of Contaminated Sediment During Construction	X	
Impact-WQ-2: Contribution to Water Quality Impairments Associated with Marina Operations	X	
Impact-WQ-3: Water Quality Degradation from Aquaculture Operations		X
Impact-C-WQ-1: Cumulative Disturbance of Contaminated Sediment During Construction	X	
Impact-C-WQ-2: Cumulative Contribution to Water Quality Impairments from Future Marina Operations	X	
Impact-C-WQ-3: Cumulative Water Quality Degradation from Aquaculture Operations		X
Section 4.9, Land Use and Planning		
N/A		
Section 4.10, Noise and Vibration		
Impact-NOI-1: Exceed Noise Thresholds at Parks During Construction.		X
Impact-NOI-2: Exceed Thresholds at Other Noise-Sensitive Receptors During Construction	X	

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Impact-NOI-3: Exceed Local Noise Limits for Construction During Prohibited Hours.	X	
Impact-NOI-4: Excessive Traffic Noise Increases Above Local Standards.	X	
Impact-NOI-5: Substantial Traffic Noise Increases Due to Roadway Improvements and Modifications	X	
Impact-NOI-6: Significant Noise Impact from Regional Mobility Hubs.	X	
Impact-NOI-7: Exceed Local Noise Limits for Commercial Developments	X	
Impact-NOI-8: Exceed Local Noise Limits for Outdoor Use Areas and Outdoor Special Events.	X	
Impact-NOI-9: Exceed Caltrans Guideline Criteria for Potential Building Damage During Construction.		X
Impact-NOI-10: Exceed Caltrans Guideline Criteria for Potential Human Annoyance at Sensitive Receptors During Project Construction.	X	
Impact-C-NOI-1: Exceed the Established 75 dBA L_{eq} Thresholds at Noise-Sensitive Receptors	X	
Impact-C-NOI-2: Generate Noise in Excess of Local Limits	X	
Impact-C-NOI-3: Increase Noise Levels at Existing Noise-Sensitive Receptors by 3 dB CNEL or More	X	
Impact-C-NOI-4: Generate Noise at Sensitive Receptors in Excess of Local Limits	X	
Impact-C-NOI-5: Exceed Caltrans Guideline Criteria for Potential Building Damage		X
Impact-C-NOI-6: Exceed Caltrans Guideline Criteria for Potential Human Annoyance at Sensitive Receptors	X	
Section 4.11, Population and Housing		
N/A		
Section 4.12, Public Services and Recreation		
Impact-PS-1: Potential to Result in Substantial Adverse Physical Impacts from the Provision of New or Physically Altered Police Protection Facilities Associated with Operation of Future Development Projects Consistent with the Proposed PMPU.	X	
Impact-PS-2: Potential to Result in Substantial Adverse Physical Impacts from the Construction of New or Physically Altered Parks Implemented Under the Proposed PMPU.	X	
Impact-PS-3: Potential to Result in Substantial Adverse Physical Impacts from the Operation of New or Physically Altered Parks Implemented Under the Proposed PMPU.	X	
Impact-REC-1: Potential to Result in Substantial Adverse Physical Impacts from the Construction of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU.	X	

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Impact-REC-2: Potential to Result in Substantial Adverse Physical Impacts from the Operation of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU.	X	
Impact-C-PS-1: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Provision of New or Physically Altered Police Protection Facilities.	X	
Impact-C-PS-2: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Construction of New or Physically Altered Parks Implemented Under the Proposed PMPU.	X	
Impact-C-PS-3: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Operation of New or Physically Altered Parks Implemented Under the Proposed PMPU.	X	
Impact-C-REC-1: Potential to Result in Cumulatively Considerable Substantial Adverse Physical Impacts from the Construction of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU	X	
Impact-C-REC-2: Potential to Result in a Cumulatively Considerable Substantial Adverse Physical Impacts from the Operation of New or Expanded Recreational Facilities Implemented Under the Proposed PMPU	X	
Section 4.13, Sea Level Rise		
N/A		
Section 4.14, Transportation, Circulation, and Mobility		
Impact TRA-1: Increase in Total VMT Associated with Future Development Consistent with the Proposed PMPU	X	
Impact TRA-2: Increase in VMT/Employee Associated with Future Development Consistent with the Proposed PMPU	X	
Impact TRA-3: Increase in VMT Due to Transportation Infrastructure Improvements Associated with the Proposed PMPU	X	
Impact-C-TRA-1: Cumulative Increase in Total VMT	X	
Impact C-TRA-2: Cumulative Increase in VMT/Employee	X	
Impact C-TRA-3: Cumulative Increase in VMT Due to Transportation Infrastructure Improvements	X	
Section, 4.15, Utilities and Service Systems		
Impact-UTIL-1: Utility-Related Land Disturbance	X	
Impact-UTIL-2: Insufficient Water Supplies Available to Serve the Proposed PMPU During Operation of Future Development		X
Impact-C-UTIL-1: Potential to Result in a Cumulatively Considerable Adverse Impact Related to the Requirement for New or Expanded Utilities	X	

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Impact-C-UTIL-2: Potential to Result in a Cumulatively Considerable Contribution to Insufficient Water Supplies During Operation		X
Impact-C-UTIL-3: Potential to Result in Cumulatively Considerable Contribution to Adverse Impacts Related to Exceeding Capacity at Existing Landfills During Construction		X

6.4 Alternatives Considered

A total of six alternatives were initially considered for evaluation. Based on the criteria described in Section 6.3, *Selection of Alternatives*, in addition to evaluating a No Project Alternative, four other alternatives were selected for detailed analysis that are capable of meeting most of the basic project objectives. The alternative that was considered, but rejected, was an alternate location alternative. Alternatives that were carried forward and analyzed in Section 6.5 below include modifications of various components of the proposed PMPU that would help reduce environmental impacts. Table 6-2 summarizes the buildout scenarios for the five alternatives that were carried forward and analyzed in this Program EIR (PEIR).

6.4.1 Alternatives Considered but Rejected

6.4.1.1 Alternate Location Alternative

The District is statutorily charged with overseeing the Tidelands and submerged lands within the Port of San Diego. The Port Act (Appendix 1 of the California Harbor and Navigation Code) was adopted in 1962. Through the Port Act, the State of California delegated its authority to the District to own, manage, and control certain tidelands and submerged waters. Specifically, the District was established for the development, operation, maintenance, control, regulation, and management of the Tidelands and lands underlying the inland navigable waters of San Diego Bay.

The proposed PMPU involves an extensive update to the existing Port Master Plan and provides the official goals and planning policies, as well as permissible land and water uses, for development and conservation of the Tidelands. The District does not have jurisdiction over water or land areas outside of the Tidelands. Consequently, such an alternative would result in the District violating its statutory obligations to oversee the Port of San Diego therefore, no other location is available for implementation of the proposed PMPU and an Alternate Location Alternative was rejected from further consideration as being legally infeasible. Furthermore, such an alternative would not reduce or avoid impacts, and would simply redistribute impacts to another location.

Table 6-2. 2050 Buildout Assumptions for Each Alternative (Net New)

Land Uses	Proposed PMPU (Potential Net Increase over Certified PMP Development)	Alternative 1: No Project (Authorized by Certified PMP)	Alternative 2: One- Third Reduced Growth	Alternative 3: One-Half Reduced Growth	Alternative 4: Harbor Island Centralized Commercial Recreation Alternative	Alternative 5: Recreation Open Space
Retail/ Restaurant sf	340,000	22,500	227,800	170,000	340,000	340,000
Hotel Rooms	3,910	1,000	2,620	1,955	3,910	3,910
Hotel Meeting Space	162,000	No Change	108,000	81,000	162,000	162,000
Recreational Boat Slips	485	50	325	243	485	485
Convention Center sf	180,000	960,000	120,000	90,000	180,000	180,000
Recreation Open Space (acres)	14.03	No Change	>14.03	>14.03	14.37	16.03

sf = square feet

6.5 Analysis of Alternatives

This section discusses each of the project alternatives and determines whether each alternative would avoid or substantially reduce any of the significant impacts of the proposed PMPU. This section also identifies any additional impacts resulting from the alternatives that would not result from the proposed PMPU. A summary comparison of the impacts of the proposed PMPU and the alternatives under consideration is included as Table 6-3 at the end of this chapter.

6.5.1 Analysis of Alternative 1 – No Project Alternative

The No Project Alternative is required by CEQA and would continue implementation of the existing PMP. Pursuant to State CEQA Guidelines Section 15126.6(e), the No Project Alternative considers the existing conditions and what would be reasonably expected to occur in the foreseeable future as entitled uses if the proposed PMPU was not approved, based on current plans and consistent with available infrastructure and community services. The remaining, entitled appealable projects identified in the proposed PMPU provide tables for each existing precise plan that assumed to be developed under this alternative. Development projections under this alternative are identified in Table 6-2 and would include up to 22,500 square feet of additional retail/restaurant space, 1,000 hotels rooms, 50 additional recreational boat slips, and 960,000 square feet of additional convention center space. In addition, the Tenth Avenue Marine Terminal (TAMT) would continue to implement the improvements consistent with the Tenth Avenue Marine Terminal Redevelopment Plan (see Chapter 3, *Project Description*, for a more detailed discussion on the TAMT Redevelopment Plan).

6.5.1.1 Aesthetics and Visual Resources

The No Project Alternative would take place within the same area and planning districts (PDs) as the proposed PMPU. This alternative would involve less development intensity than the proposed PMPU within PD2 and PD3, and would largely involve infill development within those planning districts. However, under this alternative, the baywide development standards that establish requirements for protecting scenic vista areas and view-corridor extensions and the Baywide and planning/subdistrict-specific standards that establish requirements related to building height, setback, and stepbacks in order to protect views and visual character of a site and its surroundings would not be implemented. While the existing PMP contains some policies related to protection of scenic vistas, these policies are not as specific or well-defined as the proposed policies and development standards that are in the proposed PMPU. Construction activities under this alternative could involve the use of equipment that could intrude into and temporarily block scenic vistas or view-corridor extensions, which would require the implementation of mitigation measures similar to those identified for the proposed PMPU. In addition, new buildings developed under this alternative could result in the permanent intrusion into or blockage of scenic vistas. Furthermore, like the proposed PMPU, this alternative could also introduce new sources of glare from the introduction of new and taller buildings that use glass curtainwall siding. Implementation of mitigation measures that are similar to those identified for the proposed PMPU would be required, which establish low-reflectivity standards to ensure that these glare impacts are reduced to less-than-significant levels.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant aesthetic impacts related to glare, but would result in significant and unavoidable impacts related to the potential to interfere with designated scenic vistas or view corridors during construction and the potential to result in substantial degradation of visual character and quality during construction. While the No Project Alternative would result in less development than the proposed PMPU and would result in fewer changes to the existing aesthetics of the proposed PMPU area overall, because the existing PMP does not contain the policies and development standards that would protect scenic vistas and visual character, the potential exists for this alternative to result in significant and unavoidable impacts related to aesthetic resources. Therefore, impacts related to aesthetics and visual resources would be greater for impacts on scenic vistas but reduced for visual character compared to the proposed PMPU. Overall, impacts would be similar.

6.5.1.2 Air Quality and Health Risk

This alternative would be consistent with the currently adopted PMP, which would have been accounted for in the San Diego Association of Governments' (SANDAG's) regional growth assumptions. Therefore, this alternative would be consistent with the Regional Air Quality Standards (RAQS) and State Implementation Plan (SIP), and impacts would be less than significant related to consistency with the applicable air quality plans (**Impact-AQ-1**). In addition, the No Project Alternative would result in less development than would occur under the proposed PMPU; however, it is still possible that construction emissions could exceed thresholds related to reactive organic gas (ROG) and nitrogen oxide (NO_x) emissions, especially given the amount of hotel and convention center space that would occur under the No Project Alternative (**Impact-AQ-2**). In addition, it is possible that operational impacts could exceed thresholds related to ROG and NO_x, which would result in similar impacts as the proposed PMPU related to a cumulatively considerable net increase of criteria pollutants for which the region is nonattainment (**Impact-AQ-3**). This impact related to construction and operational criteria pollutants would remain significant and unavoidable even after the implementation of mitigation (**MM-AQ-2** through **MM-AQ-8** for **Impact-AQ-2** and **MM-AQ-9** through **MM-AQ-12** for **Impact-AQ-3**). However, because this alternative would result in substantially less development overall, thereby reducing the duration and intensity of construction activity, this impact would be reduced compared to the proposed PMPU.

In addition, construction activities under this alternative could increase diesel particulate matter emissions over existing condition levels that could result in cancer or non-cancer health risks to sensitive receptors within and adjacent to the proposed PMPU area (**Impact-AQ-4**), and construction (**Impact-AQ-5**) and operational (**Impact-AQ-6**) activities under this alternative could also generate criteria pollutant emissions that exceed thresholds, which are set to protect public health. However, because the intensity of development occurring under this alternative would be reduced compared to the proposed PMPU, diesel particulate matter and criteria pollutant emissions would also be reduced. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable air quality impacts. Overall, because future development under this alternative would be substantially reduced, air quality and health risk impacts occurring under this alternative would be reduced compared to the proposed PMPU, but still would be significant and unavoidable.

6.5.1.3 Biological Resources

The No Project Alternative would result in construction and operational activities throughout the proposed PMPU area, which, similar to the proposed PMPU, would have the potential to adversely affect sensitive habitat or species or other biological resources. Specifically, landside and waterside improvements under this alternative could include activities such as the construction of new landside structures and the installation of recreational boat slips or aquaculture pens, the construction of which would result in construction noise or increased turbidity that could affect terrestrial and marine resources, and various avian species, and/or result in the loss of eelgrass beds. In addition, marine resources could be affected by operation of waterside improvements through increased overwater coverage, the discharge of harmful chemicals into waters, alteration of hydrodynamics, or increased recreational vessel activity. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts on biological resources with the implementation of mitigation. This alternative would result in similar impacts and would require similar mitigation measures as those identified for the proposed PMPU and would similarly result in less-than-significant impacts after implementation of mitigation. However, because of the reduced intensity of development, this alternative would result in reduced impacts on biological resources compared to the proposed PMPU.

6.5.1.4 Cultural Resources

The No Project Alternative would involve improvements within all planning districts within the proposed PMPU area, each of which contain one or more known historical resources and built resources that will reach the 50-year age benchmark for consideration as a potential historical resource under CEQA. For these reasons, construction activities associated with this alternative would have the potential to cause substantial adverse change in the significance of a known or yet-to-be identified historical resource. In addition, construction activities associated with implementation of future development under this alternative would involve ground-disturbing activities in areas where known or unknown archaeological resources are present. These activities could damage or destroy these archaeological resources. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on cultural resources. Implementation of this alternative could also result in significant and unavoidable impacts; however, given that this alternative would result in less development than the proposed PMPU, impacts on cultural resources under this alternative would be reduced compared to the proposed PMPU.

6.5.1.5 Geology and Soils

While the No Project Alternative would reduce the total number of hotel rooms, retail/restaurant square footage, and recreational boat berthing slips compared to the proposed PMPU, development still would occur potentially within areas mapped with geologic hazards, including ground rupture, liquefaction, strong ground-shaking due to seismic activity, or expansive or unstable soils. In addition, the potential for soil erosion also exists during implementation of this alternative. However, as discussed in Section 4.5, *Geology and Soils*, regulations contained within the California Building Code (CBC), the adjacent cities' municipal codes, and the District's Stormwater Management and Discharge Control Ordinance would ensure that any structures developed under this alternative would identify and mitigate for any geologic hazards existing within, or affecting, any given project site or reduce the potential for soil erosion. Impacts related to geology and soils

would be less than significant under this alternative, but given that this alternative would result in less development than the proposed PMPU, impacts related to geology and soils under this alternative and would be similar although reduced compared to the proposed PMPU.

In addition, as noted in Section 4.5, PD1, PD3, PD4, PD8, PD9, and PD10 contain a geologic formation that has high paleontological sensitivity, and fossil resources have been uncovered in PD4 and PD10. Because this alternative potentially would involve future development in these planning districts and could involve excavation that exceeds 10 feet in depth and requires removal of 1,000 cubic yards or more, this alternative has the potential to adversely affect unique paleontological resources or sites and would require mitigation. Impacts on paleontological resources under this alternative would be less than significant with mitigation, which is the same conclusion as the proposed PMPU. However, because the amount of earthwork that would occur would be less under the No Project Alternative, impacts would be reduced relative to the proposed PMPU.

6.5.1.6 Greenhouse Gas Emissions and Energy

Sources of construction-related greenhouse gas (GHG) emissions are identified in Table 4.6-12, of Section 4.6, *Greenhouse Gas Emissions and Energy*, and sources of operational GHG emissions are identified in Table 4.6-13 of Section 4.6. GHG emissions during construction would result from equipment vehicles associated with building construction as well as equipment associated with waterside construction, which could involve numerous in-water and landside construction pieces, such as tugboats, pushboats, small support boats, and cranes. Operational emissions are generated from a variety of sources, including utility consumption (i.e., electricity, natural gas, water, and wastewater); on- and off-road vehicles; freight rail and other maritime sources; and recreational boating. The No Project Alternative would involve all of the various GHG emission sources for both construction and operational activities, but under a less intense development scenario.

As indicated in Table 6-1, implementation of the proposed PMPU would result in one significant and unavoidable GHG impact with the remaining impacts being reduced to less than significant with the incorporation of mitigation. Given the level of development that could occur under this alternative, including increased cargo throughput at TAMT provided under the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component FEIR or increase passenger throughput at the cruise terminal that may occur in the future if demand for cruises increases, it is still likely that this alternative would result in similar significant and unavoidable impacts related to GHG emissions as the proposed PMPU, including an increase in GHG emissions relative to existing conditions and exceeding reduction targets. In addition, prior to the implementation of mitigation, future development that could occur under this alternative may not be consistent with the Climate Action Plan (CAP) because it would not implement all of the applicable reduction measures. Similar to the proposed PMPU, mitigation measures would be required to ensure that this alternative implements all applicable reduction measures and reduces impacts to less-than-significant levels. However, because this alternative would result in less growth and an overall reduction in GHG emissions, GHG emission impacts associated with this alternative would be reduced compared to the proposed PMPU.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant energy impacts with mitigation incorporated. Energy consumption would also increase compared to existing conditions under this alternative and would likely require similar mitigation measures as those identified for the proposed PMPU in order to reduce impacts related to the wasteful, inefficient, or unnecessary consumption of energy and consistency with applicable energy

use reduction plans to less-than-significant levels. Overall, because this alternative would result in less development than the proposed PMPU, energy consumption would be less. As such, energy impacts under this alternative would be less than significant after mitigation and would be reduced compared to the proposed PMPU.

6.5.1.7 Hazards and Hazardous Materials

The No Project Alternative would involve potential future development throughout the proposed PMPU area, with future development being concentrated in PD2 and PD3, and the potential exists to encounter existing known or undocumented contaminated material (i.e., soil, groundwater, or sediment) or other hazardous materials such as asbestos-containing materials, lead-based paint, polychlorinated biphenyls, or organochlorine pesticides during construction activities, which would be a significant impact that could create a hazard to the public or the environment. It is also possible that future development occurring under this alternative could be located on a site with an active or closed case listed in an environmental database for hazardous materials. Mitigation would reduce these impacts to less-than-significant levels.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to hazards and hazardous materials with the implementation of mitigation. Because impacts associated with hazardous materials tend to be localized and because this alternative would result in less development than would occur under the proposed PMPU, potential hazards and hazardous materials impacts resulting from this alternative would be less than significant with mitigation incorporated and would be reduced compared to the proposed PMPU.

6.5.1.8 Hydrology and Water Quality

As described under Section 4.8.3, *Laws, Regulations, Plans, and Policies*, in Section 4.8, *Hydrology and Water Quality*, there are numerous Federal, State, and local laws, regulations, and programs that govern water quality standards or waste discharge requirements that help ensure that surface- or groundwater quality is not degraded as a result of development projects. These laws, regulations, and programs would apply to any future development projects that are consistent with the water and land use designations and the policies of this alternative, and where these development projects propose actions that are governed by these laws, regulations, and programs. Potential landside construction activities occurring under this alternative would be required to comply with the San Diego Regional Water Quality Control Board (RWQCB) regulations for short-term dewatering, as well as the Construction General Permit for sites that would disturb more than 1 acre of land or the District's Jurisdictional Runoff Management Program (JRMP) for sites that would disturb less than 1 acre of land. Compliance with these regulations would ensure that landside construction activities under this alternative would result in less-than-significant impacts. However, this alternative would involve waterside construction activities as well, including the removal of existing pilings and piers, and construction of new pilings/piers, moorings, or floating docks, which could affect water quality due to disturbance of localized sediments and increased turbidity. While waterside construction activities would be required to comply with Clean Water Act Sections 401 and 404, there are areas where known contaminated sediments exist and bottom-disturbing activities may uncover these contaminated sediments. Therefore, this alternative has the potential to result in significant and unavoidable water quality impacts during in-water construction activities.

In addition, operational waterside activities occurring under this alternative, including increased numbers of recreational vessels, would increase the potential for additional vessels using antifouling copper-based paint for vessel hulls to potentially contribute to existing copper impairments present within PD1, PD2, PD3, PD9, and PD10, and may worsen the existing condition and result in a significant and unavoidable impact. Furthermore, aquaculture could also occur under this alternative, which could result in water quality degradation due to dissolved nitrogen and phosphorus, turbidity, biological oxygen demand, and bacteria. Mitigation would reduce this impact to less than significant.

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on hydrology and water quality. While the No Project Alternative has the potential to result in significant impacts, including a significant and unavoidable impact related to copper impairments from increases in recreational boating, due to smaller scale of these uses occurring under this alternative, impacts would be reduced compared to the proposed PMPU.

6.5.1.9 Land Use and Planning

Future development allowed under the No Project Alternative would not extend into areas beyond the proposed PMPU area, nor result in water or land use designations not already proposed in the PMPU. This alternative would not result in new roadway alignments or other infrastructure that physically would divide an established community. In general, future development occurring under this alternative would be similar to what could occur under the proposed PMPU, but at a less intense scale. As such, this alternative would not have the potential to divide an established community, would not result in land use compatibility conflicts with adjacent communities, and would be consistent with plans, policies, and regulations adopted for the purposes of avoiding or mitigating environmental effects. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to land use and planning. Impacts under this alternative would also be less than significant and would be similar to, but lesser in scale than, the proposed PMPU.

6.5.1.10 Noise and Vibration

Construction activities occurring under this alternative could exceed noise thresholds at sensitive receptors and would result in similar significant impacts related to noise and vibration as the proposed PMPU. In addition, this alternative would involve similar land uses as the proposed PMPU and would also include other activities such as roadway improvements, operational impacts associated with increased traffic noise, ambient parking lot noise, or mechanical noise from operation of aquaculture facilities or ocean-related enterprise uses. However, because this alternative would result in less development overall, this alternative would result in fewer construction activities and less traffic. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on noise. Impacts under this alternative, while also potentially being significant and unavoidable, would be reduced compared to the proposed PMPU.

6.5.1.11 Population and Housing

The No Project Alternative would have the potential to increase the amount of retail/restaurant square footage, hotel rooms, convention center square footage, and other uses that would result in increased employment throughout the proposed PMPU area compared to existing conditions. As

discussed in Section 4.11, *Population and Housing*, employment growth anticipated under the proposed PMPU would be within the growth estimates projected by SANDAG and would not result in substantial unplanned population growth in the region. Because future development occurring under this alternative would be less than what could occur under the proposed PMPU, this alternative would also result in less employment growth than the proposed PMPU, and would also be within the anticipated employment projections for the region. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to unplanned population growth. Impacts related to substantial unplanned population growth under this alternative would be less than significant and would be reduced slightly compared to the proposed PMPU.

6.5.1.12 Public Services and Recreation

The No Project Alternative would result in less future development than the proposed PMPU; however, the increase in hotel rooms and retail/restaurant space, convention space, and recreational boat slips that could occur under this alternative would result in new visitors and employees to the Downtown San Diego area and San Diego Bay. Increased numbers of visitors and employees would increase demand on public services, including the member-city police and fire protection services and Harbor Police Department (HPD) resources. However, the HPD indicated that implementation of the proposed PMPU would not generate the need for new equipment and personnel. Therefore, these services would not require new or expanded facilities (Nichols pers. comm., Webber pers. comm.). Buildout of the proposed PMPU would not require new or physically altered government facilities or result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts. Impacts would be less than significant. As such, impacts occurring under this alternative would be less than significant and would be reduced slightly compared to the proposed PMPU.

While there would be less development than for the proposed PMPU, the timing, duration, location, and extent of possible construction activities, as well as the certainty of the need for new or expanded police facilities, are all unknown at this time. Mitigation measures detailed in the proposed PMPU's Mitigation Monitoring and Reporting Program (MMRP) would be required where necessary (**MM-PS-1**); however, to effectively implement **MM-PS-1**, a specific location (including surrounding land uses), project timing, and project design specifications for a future expansion or construction of a new police facility must be known. However, because factors are not known at this time, it would be speculative to conclude that impacts would be less than significant. Moreover, because the location of the police facility may be outside of the District's jurisdiction, the District would have no authority in this case to require and enforce mitigation measures to lessen any significant impacts. Therefore, similar to the proposed PMPU, and for similar reasons; it is reasonably foreseeable that the future construction of any new or expanded police facilities potentially would result in significant and unavoidable environmental impacts. However, with less future development under this alternative, impacts on police facilities would be reduced slightly compared to the proposed PMPU.

In addition, similar to the proposed PMPU, new or expanded parks and recreational facilities could be developed under this alternative, which could result in similar impacts related to construction and operation of those parks and recreational facilities, even with implementation of mitigation measures. However, there would be fewer improvements related to parks and recreational facilities made under this alternative compared to the proposed PMPU. As such, impacts occurring under this

alternative would be significant and unavoidable but reduced as compared to those occurring under the proposed PMPU.

As indicated in Table 6-1, implementation of the PMPU would result in significant and unavoidable impacts on public services and recreation. Under this alternative, impacts would be significant and unavoidable and would be similar to the proposed PMPU. However, because this alternative would result in substantially less demand on existing public services and recreational resources than the PMPU, impacts would be reduced compared to the proposed PMPU.

6.5.1.13 Sea Level Rise

The No Project Alternative includes similar water and land use designations as those proposed in the PMPU, which could result in similar sea level rise (SLR) exposure scenarios identified in Tables 4.13-3 and 4.13-4 in Section 4.13, *Sea Level Rise*. Because this alternative could result in less development than the proposed PMPU, it would result in less development being exposed to SLR. Because SLR is a highly site-specific impact and, even within a single parcel, flood exposure can vary significantly and the exact location of future development consistent with this alternative is unknown, it is possible that this alternative could result in similar exposure as the proposed PMPU. However, this alternative would not include the same policies related to SLR that are proposed in the PMPU. These policies require, among other things, the District to prepare, and periodically update, an SLR adaptation plan (SR Policy 3.2.3) and permittees to submit site-specific hazards reports to the District that address anticipated coastal hazards over the anticipated life of the development (SR Policy 3.3.1). Other policies require permittees to site and design development to avoid impacts from coastal hazards from projected SLR considering the anticipated life of the development, and, if coastal hazards cannot be completely avoided, to plan, design, and implement adaptation strategies (see SR Policy 3.3.2). Additionally, to reduce the risks posed to neighboring properties and the natural environment from coastal protection devices, policies would require the prioritization of nature-based adaptation strategies, where feasible (SR Policy 3.3.4). If coastal protection devices are used, they must be designed to minimize adverse impacts on local sand supply, recreation, habitat, scenic views, beach width, and coastal fill, and impacts on coastal access and other Public Trust uses (SR Policy 3.3.10). SLR and increased “storminess” due to climate change may increase wave uprush, which would be analyzed on an individual development basis, as required in SR Policy 3.3.1.

While the existing PMP does not contain these policies, current District practice involves project-specific review to determine potential impacts related to SLR. In addition, the District has prepared a Sea Level Rise Vulnerability Assessment and Coastal Resiliency Report (District 2019) that includes an adaptation planning and strategy implementation chapter, which outlines recommendations for adaptation strategies, etc. Project-specific review and implementation of sea level rise adaptation strategies would ensure that future development occurring under this alternative would not exacerbate the potential for inundation due to projected SLR or storm surge. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to SLR. Impacts under this alternative would also be less than significant; however, given that this alternative would result in less development, impacts would be reduced slightly compared to the proposed PMPU.

6.5.1.14 Transportation, Circulation, and Mobility

Under the No Project Alternative, traffic related to employees and visitors for retail/restaurant and hotel rooms would be reduced compared to the proposed PMPU, which would reduce overall vehicle miles traveled (VMT) compared to the proposed PMPU, specifically in PD2 and PD3. However, because this alternative could result in up to 22,500 square feet of additional retail/restaurant uses, which would likely increase VMT related to those uses. It is probable that VMT generated by this alternative still would exceed the thresholds identified by land use in Table 4.14-5 in Section 4.13, *Transportation, Circulation, and Mobility*. Specifically, thresholds established for retail and restaurant uses would allow no increase in total planning district VMT. As such, this alternative likely still would result in significant and unavoidable impacts related to VMT.

Similar to the proposed PMPU, final plans for transportation improvement projects would be subject to the review and approval by the applicable city's traffic engineer (for roadway and bicycle facility improvements) and/or the District (for pedestrian facility improvements) to ensure that any improvement would not result in hazardous design features and would provide adequate emergency access. Impacts related to conflicts with plans and policies, hazardous design features, and adequate emergency access would be less than significant, similar to the proposed PMPU.

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on transportation, circulation, and mobility. This alternative would reduce VMT compared to the proposed PMPU, but would also result in significant and unavoidable impacts related to transportation, circulation, and mobility, and would be reduced slightly compared to the proposed PMPU.

6.5.1.15 Utilities and Service Systems

Future development under the No Project Alternative would increase demand on utilities throughout the proposed PMPU area. However, the projects listed in the existing PMP would have been taken into consideration by the public utility providers when planning for future demand on water supplies, and wastewater and landfill capacity. Because this demand has been accounted for, this alternative would not require new or expanded facilities to meet this demand. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on utilities and services systems. Based on the above, impacts on utilities would be less than significant and would be reduced compared to the proposed PMPU.

6.5.1.16 Summary of Impacts

The No Project Alternative would reduce impacts related to air quality and health risks, biological resources, cultural resources, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, noise and vibration, population and housing, public services and recreation, SLR, transportation, circulation, and mobility, and utilities and service systems. The alternative would increase impacts related to scenic vistas, although impacts overall for aesthetics and visual resources would be similar. For land use and planning, impacts would be similar to the proposed PMPU.

6.5.2 Analysis of Alternative 2 – One-Third Reduced Growth Alternative

The One-Third Reduced Growth Alternative involves similar plan components as the proposed PMPU, but at an overall reduced scale. A reduction in the scale and magnitude of the proposed land and water uses is intended to reduce impacts on air quality and health risk, biological resources, GHG emissions, hydrology and water quality, noise, public services, transportation, and utilities. The One-Third Reduced Growth Alternative proposes a reduction in intensity of development by one-third for the following uses throughout the proposed PMPU area:

- **Retail and Restaurants:** This alternative would reduce the proposed PMPU's increased retail/restaurant uses from approximately 340,000 square feet to 227,800 square feet. Convention space would also be reduced from approximately 180,000 additional square feet to approximately 120,000 additional square feet. These reductions would be largely within the Harbor Island Planning District (PD2) and Embarcadero Planning District (PD3).
- **Hotel Rooms:** The One-Third Reduced Growth Alternative would reduce the proposed increase of approximately 3,910 hotel rooms to approximately 2,620 rooms. These reductions would be largely within PD2, with a reduction of approximately 248 rooms in PD3.
- **Recreational Boat Slips:** The One-Third Reduced Growth Alternative would reduce the proposed increase of approximately 485 recreational boat slips to approximately 325 recreational boat slips. These would be largely split between PD2 and PD3, with the majority in PD2, and a small number in the Silver Strand Planning District (PD9) and the Coronado Planning District (PD10).

While reducing the scale of development, this alternative could inversely increase recreation and open space throughout the proposed PMPU area to account for the reduced development intensity. The reductions in scale and intensity would also reduce the scale of the mobility hubs currently proposed in the proposed PMPU.

6.5.2.1 Aesthetics and Visual Resources

The One-Third Reduced Growth Alternative would take place within the same area and planning districts as the proposed PMPU. This alternative would involve less development intensity than the proposed PMPU within all planning districts (but largely within PD2 and PD3), and would primarily involve infill development. Under this alternative, the same baywide development standards would be implemented that establish requirements for protecting scenic vista areas and view-corridor extensions. In addition, this alternative would include both the Baywide and planning/subdistrict-specific standards that establish requirements related to building height, setback and stepbacks in order to protect views and visual character of a site and its surroundings. As such, this alternative would result in less-than-significant impacts on scenic vistas and visual character, similar to the proposed PMPU. However, construction activities could involve the use of equipment that could intrude into and temporarily block scenic vistas or view-corridor extensions (**Impact-AES-1** and **Impact-AES-2**), which would require the implementation of mitigation measures similar to those identified for the proposed PMPU (**MM-AES-1**). Furthermore, like the proposed PMPU, this alternative could also introduce new sources of glare from the introduction of new and taller buildings that use glass curtainwall siding (**Impact-AES-3**). Implementation of mitigation measures that are similar to those identified for the proposed PMPU would be required (**MM-AES-1**, **MM-AES-**

2, and **MM-AES-3**), which would attempt to avoid construction-related impacts on scenic vistas, shield construction activities at construction sites to avoid visual impacts, and establish low-reflectivity standards to reduce glare.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant aesthetic impacts related to glare, but would result in significant and unavoidable impacts related to the potential to interfere with designated scenic vistas or view corridors during construction and the potential to result in substantial degradation of visual character and quality during construction. However, because the One-Third Reduced Growth Alternative would result in less development than the proposed PMPU, there would be fewer changes to the existing aesthetics of the proposed PMPU area and fewer construction activities through the proposed PMPU's lifetime. Therefore, impacts related to aesthetics and visual resources would be reduced compared to the proposed PMPU.

6.5.2.2 Air Quality and Health Risk

This alternative would introduce a greater number of hotel rooms, retail/restaurant space, and recreational boat and commercial fishing slips than would occur under the existing PMP and, like the proposed PMPU, may not have been accounted for in SANDAG's regional growth assumptions. Therefore, similar to the proposed PMPU, this alternative would be inconsistent with the RAQS and SIP (**Impact-AQ-1**), which would be a significant impact prior to the implementation of mitigation. Furthermore, given the potential increased development that could occur under this alternative over the existing conditions, it is possible that construction emissions could exceed thresholds related to ROG and NO_x emissions (**Impact-AQ-2**), and operational impacts could exceed thresholds related to ROG, NO_x, and carbon monoxide (CO) emissions, which would result in similar impacts as the proposed PMPU related to a cumulatively considerable net increase of criteria pollutants for which the region is nonattainment (**Impact-AQ-3**). This impact would remain significant and unavoidable even after the implementation of mitigation (**MM-AQ-2** through **MM-AQ-8** for **Impact-AQ-2** and **MM-AQ-9** through **MM-AQ-12** for **Impact-AQ-3**). However, because this alternative would result in less development overall, this impact would be reduced compared to the proposed PMPU.

In addition, construction activities under this alternative could increase diesel particulate matter emissions over existing condition levels that could result in cancer or non-cancer health risks to sensitive receptors within and adjacent to the proposed PMPU area (**Impact-AQ-4**). In addition, construction (**Impact-AQ-5**) and operational (**Impact-AQ-6**) activities could also generate criteria pollutant emissions that exceed thresholds. **MM-AQ-2** through **MM-AQ-8** for **Impact-AQ-4**, and **MM-AQ-9** through **MM-AQ-12** for **Impact-AQ-5** and **Impact-AQ-6** would be implemented. However, because the intensity of development occurring under this alternative would be reduced compared to the proposed PMPU, diesel particulate matter, and criteria pollutant emissions would also be reduced. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable air quality impacts. Overall, because future development under this alternative would be reduced, air quality and health risk impacts occurring under this alternative would be reduced compared to the proposed PMPU, but still would be significant and unavoidable.

6.5.2.3 Biological Resources

The One-Third Reduced Growth Alternative would result in construction and operational activities throughout the proposed PMPU area, which, similar to the proposed PMPU, would have the

potential to adversely affect sensitive habitat or species or other biological resources. Specifically, landside and waterside improvements under this alternative could include activities such as the construction of new landside structures and the installation of recreational boat slips or aquaculture pens, the construction of which would result in construction noise or increased turbidity that could affect terrestrial and marine resources, and various avian species, and/or result in the loss of eelgrass beds. In addition, marine resources could be affected by operation of waterside improvements through increased overwater coverage, the entry of harmful chemicals into waters, alteration of hydrodynamics, or increased recreational vessel activity (**Impact-BIO-1** through **Impact-BIO-15**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts on biological resources with the implementation of mitigation (**MM-BIO-1** through **MM-BIO-11**). This alternative would result in similar impacts and would require similar mitigation measures as those identified for the proposed PMPU and would similarly result in less-than-significant impacts after implementation of mitigation. However, because of the reduced intensity of development, this alternative would result in reduced impacts on biological resources compared to the proposed PMPU.

6.5.2.4 Cultural Resources and Tribal Cultural Resources

The One-Third Reduced Growth Alternative would involve improvements within all planning districts, each of which contain one or more known historical resource and built resources that will reach the 50-year age benchmark for consideration as a potential historical resource under CEQA within the horizon year of the proposed PMPU. For these reasons, construction activities associated with this alternative would have the potential to cause substantial adverse change in the significance of a known or yet-to-be identified historical resource (**Impact-CUL-1**). In addition, construction activities associated with implementation of future development under this alternative would involve ground-disturbing activities in areas where known or unknown archaeological resources are present (**Impact-CUL-2**). This alternative would also have the potential to result in significant impacts on tribal cultural resources due to future ground-disturbing activities (**Impact-CUL-3**). These activities could damage or destroy these archaeological resources. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on cultural resources even with the implementation of **MM-CUL-1** for **Impact-CUL-1**, **MM-CUL-2** for **Impact-CUL-2**, and **MM-CUL-2** and **MM-CUL-3** for **Impact-CUL-3**. Implementation of this alternative could result in significant and unavoidable impacts on cultural resources. However, because the amount of development would be reduced under this alternative, impacts would be reduced compared to the proposed PMPU.

6.5.2.5 Geology and Soils

Although the One-Third Reduced Growth Alternative would reduce the total number of hotel rooms, retail/restaurant square footage, convention center square footage, and recreational boat-berthing slips compared to the proposed PMPU, development potentially still would occur within areas mapped with geologic hazards, including ground rupture, liquefaction, strong ground-shaking due to seismic activity, or expansive or unstable soils. In addition, the potential for soil erosion also exists during implementation of this alternative. However, as discussed in Section 4.5, regulations contained within the California Building Code (CBC), the adjacent cities' municipal codes, and the District's Stormwater Management and Discharge Control Ordinance would ensure that any

structures developed under this alternative would identify and mitigate for any geologic hazards existing within, or affecting, any given project site or reduce the potential for soil erosion.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to geology and soils. Impacts related to geology and soils would also be less than significant under this alternative, but because the overall amount of development would be reduced, impacts would be reduced compared to the proposed PMPU.

In addition, as noted in Section 4.5, PD1, PD3, PD8, PD9, and PD10 contain a geologic formation that has high paleontological sensitivity, and fossil localities have been identified in PD4 and PD10. Because this alternative potentially would involve future development in several of these planning districts and could involve excavation that exceeds 10 feet in depth and requires removal of 1,000 cubic yards or more, this alternative has the potential to affect unique paleontological resources or sites adversely (**Impact-GEO-1**) and would require mitigation (**MM-GEO-1**). Impacts to paleontological resources under this alternative would be less than significant with mitigation, but because this alternative would result in less development than the proposed PMPU, impacts would be reduced compared to the proposed PMPU.

6.5.2.6 Greenhouse Gas Emissions and Energy

The One-Third Reduced Growth Alternative would involve all of the various GHG emission sources for both construction and operational activities associated with the proposed PMPU, but under a less-intense development scenario.

As indicated in Table 6-1, implementation of the proposed PMPU would result in one significant and unavoidable GHG impact (**Impact-GHG-1**), with the remaining impact (**Impact-GHG-2**) being reduced to less than significant with the incorporation of mitigation (**MM-GHG-1**, **MM-GHG-2**, **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-12**, and **MM-TRA-1** through **MM-TRA-3**). Given the magnitude of development that could occur under this alternative, it is still likely that it would result in similar significant and unavoidable impacts related to GHG as the proposed PMPU, including exceeding reduction targets (**Impact-GHG-1**). It should also be noted that under this alternative, the regional demand for hotel rooms would possibly be accommodated in locations that are less VMT-efficient, given the proposed PMPU area's proximity to local and regional transit options, as well as the airport and major visitor-serving attractions and amenities. Visitors staying in the proposed PMPU area would be more likely to walk or use public transit rather than drive from a more distant hotel, which would serve to reduce regional VMT and associated GHG emissions. In addition, many of the vehicle trips related to the hotel rooms proposed under the proposed PMPU would not be new trips to Downtown because they would simply be shifting trips from regional existing hotel rooms to the potential future net new PMPU hotel rooms because these would be located closer to visitors' ultimate destinations. In addition, prior to the implementation of mitigation, future development that could occur under this alternative may not be consistent with the CAP and statewide plans because it would not implement all of the applicable GHG reduction measures (**Impact-GHG-2**). Similar to the proposed PMPU, mitigation measures would be required to ensure that this alternative implements all applicable GHG reduction measures and reduce impacts to less-than-significant levels (**MM-GHG-1**, **MM-GHG-2**, **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-13**, and **MM-TRA-1** through **MM-TRA-3**). However, because this alternative would result in less growth and an overall reduction in GHG emissions, GHG emission impacts associated with this alternative would be reduced compared to the proposed PMPU.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant energy impacts with mitigation incorporated (**Impact-EN-1** and **Impact-EN-2**). Energy consumption would also increase compared to existing conditions under this alternative and likely would require similar mitigation measures as those identified for the proposed PMPU in Section 4.6 (**MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, and **MM-AQ-9** through **MM-AQ-12**, **MM-GHG-1**, and **MM-GHG-2** for **Impact-EN-1**, and **MM-AQ-9** through, **MM-AQ-12**, and **MM-GHG-2** for **Impact-EN-2**) in order to reduce impacts related to the wasteful, inefficient, or unnecessary consumption of energy and consistency with applicable energy-use reduction plans to less-than-significant levels. Overall, because this alternative would result in less development than the proposed PMPU, energy consumption would be less, and impacts would be reduced compared to the proposed PMPU.

6.5.2.7 Hazards and Hazardous Materials

The One-Third Reduced Growth Alternative would involve potential future development throughout the proposed PMPU area, primarily concentrated in PD2 and PD3, and the potential exists to encounter existing known or undocumented contaminated materials (i.e., soil, groundwater, or sediment) or other hazardous materials (e.g., asbestos-containing materials, lead-based paint, polychlorinated biphenyls, organochlorine pesticides) during construction activities, which would be a significant impact that could create a hazard to the public or the environment. It is also possible that future development occurring under this alternative could be located on a site with an active or closed case listed in an environmental database for hazardous materials (**Impact-HAZ-1** through **Impact-HAZ-4**). Mitigation would reduce these impacts to less-than-significant levels (**MM-HAZ-1** and **MM-HAZ-2**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to hazards and hazardous materials with the implementation of mitigation (**MM-HAZ-1** and **MM-HAZ-2**). Because impacts associated with hazardous materials tend to be localized, and this alternative could result in development at the same locations as those that would occur under the proposed PMPU, potential hazards and hazardous materials impacts resulting from this alternative would be less than significant with mitigation incorporated, but because of the reduced scale of development that would occur under this alternative, impacts would be reduced compared to the proposed PMPU.

6.5.2.8 Hydrology and Water Quality

As described under Section 4.8.3, *Laws, Regulations, Plans, and Policies*, in Section 4.8, *Hydrology and Water Quality*, numerous Federal, State, and local laws, regulations, and programs govern water quality standards or waste discharge requirements and help ensure that surface- or groundwater quality is not degraded as a result of development projects. These laws, regulations, and programs would apply to any future development projects that are consistent with the water and land use designations and policies of this alternative and where these development projects propose actions governed by these laws, regulations, and programs. Potential landside construction activities occurring under this alternative would be required to comply with the San Diego RWQCB regulations for short-term dewatering, as well as the Construction General Permit for sites that would disturb more than 1 acre of land or the District's JRMP for sites that would disturb less than 1 acre of land. Compliance with these regulations would ensure that landside construction activities under this alternative result in less-than-significant impacts. However, this alternative would involve waterside construction activities, as well, including the removal of existing pilings and piers

and construction of new pilings/piers, moorings, or floating docks, which could affect water quality due to disturbance of localized sediments and increased turbidity. Although waterside construction activities would be required to comply with Clean Water Act Sections 401 and 404, there are areas where known contaminated sediments exist, and bottom-disturbing activities may uncover these contaminated sediments. Therefore, this alternative has the potential to result in significant and unavoidable water quality impacts during in-water construction activities.

In addition, operational waterside activities occurring under this alternative, including increased numbers of recreational vessels, would increase the potential for additional vessels using antifoulant copper-based paint for vessel hulls potentially to contribute to existing copper impairments present within PD1, PD2, PD3, PD9, and PD10 and may worsen the existing condition and result in a significant and unavoidable impact (**Impact-WQ-2**). Furthermore, aquaculture could also occur under this alternative, which could result in water quality degradation due to dissolved nitrogen and phosphorus, turbidity, biological oxygen demand, and bacteria (**Impact-WQ-3**). Mitigation would reduce this impact to less than significant (**MM-WQ-9**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on hydrology and water quality. This alternative has a similar potential to result in significant and unavoidable impacts on hydrology and water quality, but because of the reduced scale of development that would occur under this alternative, these impacts would be reduced compared to the proposed PMPU.

6.5.2.9 Land Use and Planning

Future development allowed under the One-Third Reduced Growth Alternative would not extend into areas beyond the proposed PMPU area, nor result in water or land use designations not already proposed in the proposed PMPU. This alternative would not result in new roadway alignments or other infrastructure that physically would divide an established community. In general, future development occurring under this alternative would be similar to that which could occur under the proposed PMPU, but at a less-intense scale. As such, this alternative would not have the potential to divide an established community and would be consistent with plans, policies, and regulations adopted for the purposes of avoiding or mitigating environmental effects. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to land use and planning. Impacts under this alternative would also be less than significant and similar to, but lesser in scale than, the proposed PMPU.

6.5.2.10 Noise and Vibration

Construction activities occurring under this alternative could exceed noise thresholds at sensitive receptors and would result in similar significant impacts related to noise and vibration as the proposed PMPU (**Impact-NOI-1** and **Impact-NOI-2**). In addition, because this alternative involves the same land uses, roadway improvements, and implementation of other amenities (e.g., mobility hubs) as the proposed PMPU, operational impacts associated with increased traffic noise, ambient parking lot noise, or mechanical noise from operation of aquaculture facilities or marine technology uses would occur under this alternative (**Impact-NOI-3** through **Impact-NOI-10**). However, because this alternative would result in less development overall, it also would result in fewer construction activities and less traffic. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts related to noise and impacts under this

alternative; however, while still potentially being significant and unavoidable, these impacts would be reduced compared to the proposed PMPU.

6.5.2.11 Population and Housing

The One-Third Reduced Growth Alternative would have the potential to increase the amount of retail/restaurant square footage, hotel rooms, convention center square footage, and other uses that would result in increased employment throughout the proposed PMPU area compared to existing conditions. As discussed in Section 4.11, *Population and Housing*, employment growth anticipated under the proposed PMPU would be within the growth estimates projected by SANDAG and would not result in substantial unplanned population growth in the region. Because future development occurring under this alternative would be less than that which could occur under the proposed PMPU, this alternative would also result in less employment growth than the proposed PMPU, but would also be within the anticipated employment projections for the region. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to unplanned population growth. Impacts related to substantial unplanned population growth under this alternative would be less than significant and, due to the reduced scale of development that would occur under this alternative, impacts would be reduced slightly compared to the proposed PMPU.

6.5.2.12 Public Services and Recreation

The One-Third Reduced Growth Alternative would result in less future development than the proposed PMPU; however, the increase in hotel rooms and retail/restaurant space, convention space, and recreational boat slips that could occur under this alternative would result in a considerable increase of visitors and employees to the Downtown San Diego area and San Diego Bay. Larger numbers of visitors and employees would also increase demand on public services, including member-city police and fire protection services and HPD resources. However, the HPD indicated that any additional demand for new equipment and personnel due to implementation of the proposed PMPU would not require new or expanded facilities (Nichols pers. comm.; Webber pers. comm.). Therefore, buildout of the proposed PMPU would not require new or physically altered government facilities or result in the need for such, the construction of which could cause significant environmental impacts. Impacts would be less than significant. As such, impacts under this alternative would be less than significant and similar to the proposed PMPU.

Although there would be less development under this alternative than for the proposed PMPU, the timing, duration, location, and extent of possible construction activities, as well as the certainty of the need for new or expanded police facilities, other than HPD, are all unknown at this time. Mitigation measures detailed in the proposed PMPU's MMRP would be required where necessary (**MM-PS-1**); however, to effectively implement **MM-PS-1**, a specific location (including surrounding land uses), project timing, and project design specifications for a future expansion or construction of a new police facility must be known. Because these factors are not known at this time, it would be speculative to conclude that impacts would be less than significant, even with implementation of mitigation measure **MM-PS-1**. Moreover, because the police facility may be located outside of the District's jurisdiction, the District would have no authority in this case to require and enforce mitigation measures to lessen any significant impacts. Therefore, similar to the proposed PMPU, and for similar reasons, it is reasonably foreseeable that the future construction of any new or expanded police facilities under this alternative potentially would result in significant and unavoidable

environmental impacts. However, with less development under this alternative, impacts on police facilities would be reduced slightly compared to the proposed PMPU.

In addition, new or expanded park and recreational facilities could be developed under this alternative, which could result in similar impacts related to construction and operation of those parks and recreational facilities, even with implementation of mitigation measures. However, demand for new or expanded parks and recreational facilities would be less than what would occur under the proposed PMPU, and this alternative construction and operation of new or expanded parks and recreational facilities could still occur due to ground-breaking activities or operational impacts related to air and water quality. Implementation of the proposed PMPU would result significant and unavoidable impacts related to parks and recreation. Because this alternative would result in less overall new development of parks and recreational facilities, even though this alternative still would result in significant impacts related to parks and recreational resources, impacts would be reduced slightly compared to the proposed PMPU.

6.5.2.13 Sea Level Rise

The One-Third Reduced Growth Alternative would result in similar water and land use designations being applied throughout the proposed PMPU area, which could result in similar SLR exposure scenarios to those identified Tables 4.13-3 and 4.13-4 in Section 4.13, *Sea Level Rise*. Because this alternative could result in less development than the proposed PMPU, it potentially would result in less development being exposed to SLR. Because SLR is a highly site-specific impact, and flood exposure can vary significantly even within a single parcel, and because the exact location of future development consistent with this alternative is unknown, it is possible that this alternative could result in similar exposure as the proposed PMPU. However, this alternative would include the same policies related to SLR that are proposed in the proposed PMPU. These policies require, among other things, that the District prepare and periodically update an SLR adaptation plan (SR Policy 3.2.3) and that permittees submit site-specific hazards reports to the District that address anticipated coastal hazards over the projected life of the development (SR Policy 3.3.1). Other policies require permittees to site and design development to avoid impacts from coastal hazards from projected SLR, considering the anticipated life of the development, and, if coastal hazards cannot be completely avoided, to plan, design, and implement adaptation strategies (see SR Policy 3.3.2). Additionally, to reduce the risks posed to neighboring properties and the natural environment from coastal protection devices, policies would require the prioritization of nature-based adaptation strategies, where feasible (SR Policy 3.3.4). If coastal protection devices are used, they must be designed to minimize adverse impacts on local sand supply, recreation, habitat, scenic views, beach width, coastal fill, coastal access, and other Public Trust uses (SR Policy 3.3.10). SLR and increased “storminess” due to climate change may increase wave uprush, which would be analyzed on an individual development basis, as required in SR Policy 3.3.1. Specific design approaches would be reviewed by the District as specific development proposals are submitted for development review. Consistency with these policies would ensure that future development occurring under this alternative would not exacerbate the potential for inundation due to projected SLR or storm surge. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to SLR. Impacts related to this alternative would be less than significant; however, because this alternative would result in less development than the proposed PMPU, SLR impacts under this alternative would be reduced slightly compared to the proposed PMPU.

6.5.2.14 Transportation, Circulation, and Mobility

Under the One-Third Reduced Growth Alternative, traffic related to employees and visitors for retail/restaurant and hotel rooms would be reduced compared to the proposed PMPU, which would reduce overall VMT compared to the proposed PMPU, specifically in PD2 and PD3. However, given that the intensity of development under this alternative is still relatively large, it is possible that potential VMT generated by this alternative still would exceed the thresholds identified by land use in Table 4.14-3 in Section 4.13, *Transportation, Circulation, and Mobility*. Specifically, thresholds established for employment-based uses (e.g., hotels) require these uses to achieve a VMT reduction of 15 percent below the regional average, and retail and restaurant uses would allow no increase in total planning district VMT. As such, this alternative likely still would result in significant and unavoidable impacts related to VMT (**Impact-TRA-1** through **Impact-TRA-4**). However, as discussed above under GHG emissions, it should also be noted that under this alternative, the regional demand for hotel rooms possibly could be accommodated in places that are less VMT-efficient, given the proposed PMPU area's proximity to local and regional transit options, as well as the airport and major visitor-serving attractions and amenities. Visitors staying in the proposed PMPU area would be more likely to walk or use public transit, rather than drive from a more distant hotel, which would serve to reduce regional VMT and associated GHG emissions. In addition, many of the vehicle trips related to the hotel rooms proposed under the proposed PMPU would not be new trips to Downtown because they would simply be shifting trips from existing regional hotel rooms to the potential future net new PMPU hotel rooms, which would be located closer to visitors' ultimate destinations.

Similar to the proposed PMPU, this alternative would include physical improvements to the transportation infrastructure that would seek to increase the accessibility and connectivity of multi-modal infrastructure throughout the tidelands. These changes would be consistent with the goals and policies of the programs, plans, policies, or ordinances related to the circulation system applicable to the proposed PMPU area. Furthermore, similar to the proposed PMPU, final plans for transportation improvement projects would be subject to the review and approval by the applicable city's traffic engineer (for roadway and bicycle facility improvements) or the District (for pedestrian facility improvements) to ensure that any improvement would not result in hazardous design features and would provide adequate emergency access. Impacts related to conflicts with plans and policies, hazardous design features, and adequate emergency access would be less than significant, similar to the proposed PMPU.

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on transportation, circulation, and mobility. Future development occurring under this alternative still could result in significant and unavoidable VMT impacts. Overall, however, because this alternative would result in less development and less total VMT, it also would result in slightly reduced transportation, circulation, and mobility impacts compared to the proposed PMPU.

6.5.2.15 Utilities and Service Systems

Future development under the One-Third Reduced Growth Alternative would increase demand on utilities throughout the proposed PMPU area because the remainder of the proposed PMPU potential future development could still occur. However, this demand would be reduced compared to the proposed PMPU, and future development that could occur under this alternative may require new or expanded utilities, the construction of which may result in significant and unavoidable

impacts related to ground-disturbance, even with mitigation (**Impact-UTIL-1**). In addition, given that potential buildout under this alternative could result in up to 2,620 new hotel rooms, as well as additional retail and restaurant space, convention space, and meeting space, all of which would increase demand on water supplies, water supplies may be insufficient to meet the increased demand generated under this alternative, similar to the proposed PMPU (**Impact-UTIL-2**). Also similar to the proposed PMPU, incorporation of this alternative into the next urban water management plan (UWMP) updates, preparation of a water demand analysis, and implementation of water conservation measures would be required for future development occurring under this alternative to ensure that sufficient water supplies exist before a project is approved, and impacts would be less than significant with mitigation (**MM-UTIL-1**, **MM-UTIL-2**, and **MM-UTIL-3**). Similar to the proposed PMPU, and although a regional issue, cumulative construction and operational activities under this alternative could generate solid waste that would exceed capacity at existing landfills (**Impact-C-UTIL-3** and **Impact-C-UTIL-4**). Similarly, site-specific environmental reviews for future development occurring under this alternative also would be required to coordinate the growth projections of this alternative with the Five-Year Review Report update and ensure that sufficient landfill capacity exists prior to project approval (**MM-C-UTIL-1** and **MM-C-UTIL-2**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on utilities and services systems as a result of utility-related land disturbance and a less-than-significant impact related to insufficient water or solid waste facilities after mitigation. Overall, because demand on utilities would be reduced under this alternative, impacts would also be reduced compared to the proposed PMPU, but still would be significant and unavoidable related to land disturbance.

6.5.2.16 Summary of Impacts

The One-Third Reduced Growth Alternative would reduce impacts related to aesthetics and visual resources, air quality and health risks, biological resources, GHG emissions, hydrology and water quality, noise and vibration, public services and recreation, traffic, circulation, and mobility, and utilities and service systems. Impacts related to land use and planning would be similar to the proposed PMPU.

6.5.3 Analysis of Alternative 3 – One-Half Reduced Growth Alternative

The One-Half Reduced Growth Alternative involves similar plan components as the proposed PMPU, but at an overall reduced scale. A reduction in the scale and magnitude of the proposed land and water uses is intended to reduce impacts on air quality and health risk, biological resources, GHG emissions, hydrology and water quality, noise, public services, transportation, and utilities. The One-Half Reduced Growth proposes a reduction in intensity of development by one-half for the following uses throughout the proposed PMPU area:

- **Retail and Restaurants:** This alternative would reduce the proposed PMPU's increased retail/restaurant uses from approximately 340,000 square feet to 170,000 square feet. Convention space also would be reduced from approximately 180,000 additional square feet to approximately 90,000 additional square feet. These reductions would be largely within the Harbor Island Planning District (PD2), with approximately 41,000 square feet in the Embarcadero Planning District (PD3).

- **Hotel Rooms:** The One-Half Reduced Growth Alternative would reduce the proposed increase of approximately 3,910 hotel rooms to approximately 1,955 rooms. These reductions would be largely within the Harbor Island Planning District (PD2), with a reduction of approximately 425 rooms in the Embarcadero Planning District (PD3).
- **Recreational Boat Slips:** The One-Half Reduced Growth Alternative would reduce the proposed increase of approximately 485 recreational boat slips to approximately 243 recreational boat slips. These would be largely split between the Harbor Island Planning District (PD2) and the Embarcadero Planning District (PD3), with the majority in PD2, and a small number in the Silver Strand Planning District (PD9) and the Coronado Planning District (PD10).

Although it reduces the scale of development, this alternative would increase recreation and open space inversely throughout the proposed PMPU area to account for the reduced development intensity. The reductions in scale and intensity would also reduce the scale of the mobility hubs currently proposed in the proposed PMPU.

6.5.3.1 Aesthetics and Visual Resources

The One-Half Reduced Growth Alternative would take place within the same area and planning districts as the proposed PMPU. This alternative would involve less development intensity than the proposed PMPU within all planning districts (but largely within PD2 and PD3) and would also involve infill development within the planning districts primarily. Under this alternative, the same baywide development standards would be implemented that establish requirements for protecting scenic vista areas and view-corridor extensions. In addition, this alternative would include both the baywide and planning/subdistrict-specific standards that establish requirements related to building height, setback, and stepbacks, in order to protect views and visual character of a site and its surroundings. As such, this alternative would result in less-than-significant impacts on scenic vistas and visual character, similar to the proposed PMPU. However, construction activities could involve the use of equipment that could intrude into and temporarily block scenic vistas or view-corridor extensions or adversely affect visual character (**Impact-AES-1** and **Impact-AES-2**), which would require the implementation of mitigation measures similar to those identified for the proposed PMPU (**MM-AES-1** and **MM-AES-2**). Furthermore, like the proposed PMPU, this alternative could also introduce new sources of glare from the development of new and taller buildings that use glass curtainwall siding (**Impact-AES-3**). Implementation of mitigation measures that are similar to those identified for the proposed PMPU would be required (**MM-AES-3**), establishing low-reflectivity standards to ensure that these glare impacts are reduced to less-than-significant levels.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant aesthetic impacts related to glare, but would result in significant and unavoidable impacts related to the potential to interfere with designated scenic vistas or view corridors during construction and the potential to result in substantial degradation of visual character and quality during construction. However, because the One-Half Reduced Growth Alternative would result in 50 percent less development than the proposed PMPU, there would be fewer changes to the existing aesthetics of the proposed PMPU area and fewer construction activities through the proposed PMPU's lifetime. Therefore, impacts related to aesthetics and visual resources would be reduced compared to the proposed PMPU.

6.5.3.2 Air Quality and Health Risk

This alternative would introduce a greater number of hotel rooms, retail/restaurant space, and recreational boat and commercial fishing slips than would occur under the existing PMP and, like the proposed PMPU, may not have been accounted for in SANDAG's regional growth assumptions. Therefore, similar to the proposed PMPU, this alternative would be inconsistent with the RAQS and SIP, which would be a significant impact prior to the implementation of mitigation (**Impact-AQ-1**). Furthermore, given the potential increased development that could occur under this alternative over the existing condition, it is possible that construction emissions could exceed thresholds related to ROG emissions (**Impact-AQ-2**), but may reduce NO_x emissions under the threshold. Operational impacts could still exceed thresholds related to ROG, NO_x, and CO emissions related to a cumulatively considerable net increase of criteria pollutants for which the region is nonattainment (**Impact-AQ-3**). This impact would remain significant and unavoidable even after the implementation of mitigation (**MM-AQ-2** through **MM-AQ-8** for **Impact-AQ-2** and **MM-AQ-9** through **MM-AQ-12** for **Impact-AQ-3**). However, because this alternative would result in 50 percent less development overall, this impact would be reduced compared to the proposed PMPU.

In addition, construction activities under this alternative could increase diesel particulate matter emissions over existing condition levels, which could result in cancer or non-cancer health risks to sensitive receptors within and adjacent to the proposed PMPU area (**Impact-AQ-4**). Construction (**Impact-AQ-5**) and operational (**Impact-AQ-6**) activities could also generate criteria pollutant emissions that exceed thresholds (**Impact-AQ-5**). **MM-AQ-2** through **MM-AQ-8** for **Impact-AQ-4** and **MM-AQ-9** through **MM-AQ-12** for **Impact-AQ-5** and **Impact-AQ-6** would be implemented. However, because the intensity of development occurring under this alternative would be reduced compared to the proposed PMPU, diesel particulate matter, PM₁₀, and PM_{2.5} emissions would also be reduced. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable air quality impacts. Overall, because future development under this alternative would be substantially reduced, air quality and health risk impacts occurring under this alternative would be reduced compared to the proposed PMPU, but would be significant and unavoidable.

6.5.3.3 Biological Resources

The One-Half Reduced Growth Alternative would result in construction and operational activities throughout the proposed PMPU area, which, similar to the proposed PMPU, would have the potential to affect sensitive habitat or species or other biological resources adversely. Specifically, landside and waterside improvements under this alternative would include activities such as the construction of new landside structures and the installation of recreational boat slips or aquaculture pens, the construction of which would result in construction noise or increased turbidity that could affect terrestrial and marine resources and various avian species and result in the loss of eelgrass beds. In addition, marine resources could be affected by operation of waterside improvements through increased overwater coverage, the entry of harmful chemicals into waters, alteration of hydrodynamics, or increased recreational vessel activity (**Impact-BIO-1** through **Impact-BIO-15**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts on biological resources with the implementation of mitigation (**MM-BIO-1** through **MM-BIO-11**). This alternative would result in similar impacts and require similar mitigation measures as those identified for the proposed PMPU and would similarly result in less-than-significant impacts after implementation of mitigation. However, because of the substantially

reduced intensity of development, this alternative would result in reduced impacts on biological resources compared to the proposed PMPU.

6.5.3.4 Cultural Resources and Tribal Cultural Resources

The One-Half Reduced Growth Alternative would involve improvements within all planning districts, each of which contain one more known historical resource and built resources that will reach the 50-year age benchmark for consideration as a potential historical resource under CEQA within the horizon year of the proposed PMPU. For these reasons, construction activities associated with this alternative would have the potential to cause substantial adverse change in the significance of a known or yet-to-be identified historical resource (**Impact-CUL-1**). In addition, construction activities associated with implementation of future development under this alternative would involve ground-disturbing activities in areas where known or unknown archaeological resources are present (**Impact-CUL-2**). These activities could damage or destroy these archaeological resources. This alternative would also have the potential to result in significant impacts on tribal cultural resources due to future ground-disturbing activities (**Impact-CUL-3**). As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on cultural resources even with the implementation of **MM-CUL-1** for **Impact-CUL-1**, **MM-CUL-2** for **Impact-CUL-2**, and **MM-CUL-2** and **MM-CUL-3** for **Impact-CUL-3**. Implementation of this alternative could result in significant and unavoidable impacts on cultural resources; however, because this alternative would result in substantially less development than the proposed PMPU, impacts related to cultural resources would be similar, although reduced compared to the proposed PMPU.

6.5.3.5 Geology and Soils

Although the One-Half Reduced Growth Alternative would reduce the total number of hotel rooms, retail/restaurant square footage, convention center square footage, and recreational boat berthing slips compared to the proposed PMPU, development potentially still would occur within areas mapped with geologic hazards, including ground rupture, liquefaction, strong ground-shaking due to seismic activity, or expansive or unstable soils. In addition, the potential for soil erosion during implementation of this alternative also exists. However, as discussed in Section 4.5, regulations contained within the California Building Code (CBC), the adjacent cities' municipal codes, and the District's Stormwater Management and Discharge Control Ordinance would ensure that any structures developed under this alternative would identify and mitigate for any geologic hazards existing within, or affecting, any given project site or reduce the potential for soil erosion.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to geology and soils. These impacts would also be less than significant under this alternative, but because the overall amount of development would be reduced, impacts would be reduced compared to the proposed PMPU.

In addition, as noted in Section 4.5, PD1, PD3, PD8, PD9, and PD10 contain a geologic formation that has high paleontological sensitivity, and fossil localities have been identified in PD4 and PD10. Because this alternative potentially would involve future development in several of these planning districts and could involve excavation that exceeds 10 feet in depth and requires removal of 1,000 cubic yards or more, this alternative has the potential to adversely affect unique paleontological resources or sites (**Impact-GEO-1**) and would require mitigation (**MM-GEO-1**). As indicated in Table 6-1, the proposed PMPU would result in less-than-significant impacts with mitigation. Impacts

to paleontological resources under this alternative would be less than significant with mitigation; however, because this alternative would result in substantially less development than the proposed PMPU, impacts related to geology and soils would be reduced compared to the proposed PMPU.

6.5.3.6 Greenhouse Gas Emissions and Energy

The One-Half Reduced Growth Alternative would involve all of the various GHG emission sources for both construction and operational activities associated with the proposed PMPU, but under a substantially less intense development scenario.

As indicated in Table 6-1, implementation of the proposed PMPU would result in one significant and unavoidable GHG impact (**Impact-GHG-1**), with the remaining impact (**Impact-GHG-2**) reduced to less than significant with the incorporation of mitigation (**MM-GHG-1**, **MM-GHG-2**, **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-13**, and **MM-TRA-1** through **MM-TRA-3**). Given the substantial reduction in development that would occur under this alternative, which would include associated reductions in construction activities, utility consumption, vehicular traffic, and solid waste generation, with the implementation of mitigation, this alternative could reduce GHG emissions relative to existing conditions and could fall below reduction targets, which would result in less-than-significant impacts related to GHG emissions. However, under this alternative, the regional demand for hotel rooms possibly could be accommodated in areas that are less VMT-efficient, given the proposed PMPU area's proximity to local and regional transit options, as well as the airport and major visitor-serving attractions and amenities. Visitors staying in the proposed PMPU area would be more likely to walk or use public transit, rather than drive from a more distant hotel, which would serve to reduce regional VMT and associated GHG emissions. In addition, many of the vehicle trips related to the proposed PMPU's potential future total hotel rooms would not be new trips to Downtown, because they would simply be shifting trips from other regional existing hotel rooms to the proposed PMPU's potential future total hotel rooms as these would be located closer to visitors' ultimate destinations. In addition, prior to the implementation of mitigation, future development that could occur under this alternative may not be consistent with the CAP and statewide plans because it would not implement all of the applicable GHG reduction measures (**Impact-GHG-2**). Similar to the proposed PMPU, mitigation measures would be required to ensure that this alternative implements all applicable GHG reduction measures and reduces impacts to less-than-significant levels (**MM-GHG-1**, **MM-GHG-2**, **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-13**, and **MM-TRA-1** through **MM-TRA-3**). However, because this alternative would result in substantially less growth and an overall reduction in GHG emissions, GHG emission impacts associated with this alternative would be reduced compared to the proposed PMPU.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant energy impacts with mitigation incorporated (**Impact-EN-1** and **Impact-EN-2**). Energy consumption would also increase compared to existing conditions under this alternative and would likely require similar mitigation measures as those identified for the proposed PMPU in Section 4.6 (**MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, and **MM-AQ-9** through **MM-AQ-12**, **MM-GHG-1**, and **MM-GHG-2** for **Impact-EN-1** and **MM-AQ-9** through **MM-AQ-12** and **MM-GHG-2** for **Impact-EN-2**) in order to reduce impacts related to the wasteful, inefficient, or unnecessary consumption of energy, and ensure consistency with applicable energy use reduction plans, to less-than-significant levels. Overall, because this alternative would result in substantially less development than the proposed PMPU, energy consumption would be less, and impacts would be reduced compared to the proposed PMPU.

6.5.3.7 Hazards and Hazardous Materials

The One-Half Reduced Growth Alternative would involve potential future development throughout the proposed PMPU area, with future development primarily concentrated in PD2 and PD3. Similar to the proposed PMPU, the potential exists to encounter existing known or undocumented contaminated materials (i.e., soil, groundwater, or sediment) or other hazardous materials (e.g., asbestos-containing materials, lead-based paint, polychlorinated biphenyls, organochlorine pesticides) during construction activities, which would be a significant impact that could create a hazard to the public or the environment. It is also possible that future development occurring under this alternative could be located on a site with an active or closed case listed in an environmental database for hazardous materials (**Impact-HAZ-1** through **Impact-HAZ-4**). Mitigation would reduce these impacts to less-than-significant levels (**MM-HAZ-1** and **MM-HAZ-2**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to hazards and hazardous materials with the implementation of mitigation (**MM-HAZ-1** and **MM-HAZ-2**). Because impacts associated with hazardous materials tend to be localized, and this alternative could result in development at the same locations as those that would occur under the proposed PMPU, potential hazards and hazardous materials impacts resulting from this alternative would be less than significant with mitigation incorporated; however, because this alternative would result in substantially less development than the proposed PMPU, impacts would be reduced compared to the proposed PMPU.

6.5.3.8 Hydrology and Water Quality

As described under Section 4.8.3 in Section 4.8, *Hydrology and Water Quality*, numerous Federal, State, and local laws, regulations, and programs govern water quality standards or waste discharge requirements and help ensure that surface- or groundwater quality is not degraded as a result of development projects. These laws, regulations, and programs would apply to any future development projects that are consistent with the water and land use designations and the policies of this alternative and where these development projects propose actions that are governed by these laws, regulations, and programs. Potential landside construction activities occurring under this alternative would be required to comply with the San Diego RWQCB regulations for short-term dewatering, as well as the Construction General Permit for sites that would disturb more than one acre of land or the District's JRMP for sites that would disturb less than 1 acre of land. Compliance with these regulations would ensure that landside construction activities under this alternative would result in less-than-significant impacts. However, this alternative would involve waterside construction activities, as well, including the removal of existing pilings and piers and construction of new pilings/piers, moorings, or floating docks, which could affect water quality due to disturbance of localized sediments and increased turbidity. Although waterside construction activities would be required to comply with Clean Water Act Sections 401 and 404, there are areas where known contaminated sediments exist, and bottom-disturbing activities may uncover these contaminated sediments; therefore, this alternative has the potential to result in significant and unavoidable impacts to water quality during in-water construction activities.

In addition, operational waterside activities occurring under this alternative, including increased numbers of recreational vessels, would increase the potential for additional vessels using antifoulant copper-based paint for vessel hulls potentially to contribute to existing copper impairments present within PD1, PD2, PD3, PD9, and PD10 and may worsen the existing condition and result in a significant and unavoidable impact (**Impact-WQ-2**). Furthermore, aquaculture could

also occur under this alternative, which could result in water quality degradation due to dissolved nitrogen and phosphorus, turbidity, biological oxygen demand, and bacteria (**Impact-WQ-3**). Mitigation would reduce this impact to less than significant (**MM-WQ-9**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on hydrology and water quality. This alternative has a similar potential to result in significant and unavoidable impacts on hydrology and water quality, but due to the substantially reduced scale of development that would occur under this alternative, these impacts would be reduced compared to the proposed PMPU.

6.5.3.9 Land Use and Planning

Future development allowed under the One-Half Reduced Growth Alternative would not extend into areas beyond the proposed PMPU area, nor result in water or land use designations not already proposed in the proposed PMPU. This alternative would not result in new roadway alignments or other infrastructure that physically would divide an established community. In general, future development occurring under this alternative would be similar to that which could occur under the proposed PMPU, but at a substantially less-intense scale. As such, this alternative would not have the potential to divide an established community and would be consistent with plans, policies, and regulations adopted for the purposes of avoiding or mitigating environmental effects. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to land use and planning. Impacts under this alternative would also be less than significant and similar to the proposed PMPU.

6.5.3.10 Noise and Vibration

Construction activities occurring under this alternative could exceed noise thresholds at sensitive receptors and would result in similar significant impacts related to noise and vibration as the proposed PMPU (**Impact-NOI-1** and **Impact-NOI-2**). In addition, because this alternative involves the same land uses, roadway improvements, and implementation of other amenities, such as mobility hubs, as the proposed PMPU, operational impacts associated with increased traffic noise, ambient parking lot noise, or mechanical noise from operation of aquaculture facilities or Marine Technology uses would occur under this alternative (**Impact-NOI-3** through **Impact-NOI-10**). However, because this alternative would result in substantially less development overall, this alternative would result in fewer construction activities and less traffic. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts related to noise and, therefore, impacts under this alternative, while still potentially being significant and unavoidable, would be reduced compared to the proposed PMPU.

6.5.3.11 Population and Housing

The One-Half Reduced Growth Alternative would have the potential to increase the amount of retail/restaurant square footage, hotel rooms, convention center square footage, and other uses that would result in increased employment throughout the proposed PMPU area compared to existing conditions. As discussed in Section 4.11, *Population and Housing*, employment growth anticipated under the proposed PMPU would be within the growth estimates projected by SANDAG and would not result in substantial unplanned population growth in the region. Because future development occurring under this alternative would be substantially less than that which could occur under the proposed PMPU, this alternative would also result in less employment growth than the proposed

PMPU and would also be within the anticipated employment projections for the region. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to unplanned population growth. Impacts related to substantial unplanned population growth under this alternative would be less than significant and slightly reduced compared to the proposed PMPU.

6.5.3.12 Public Services and Recreation

The One-Half Reduced Growth Alternative would result in substantially less development than the proposed PMPU; however, the increase in hotel rooms and retail/restaurant space, convention space, and recreational boat slips that could occur under this alternative would result in an increase in visitors and employees to the Downtown San Diego area and San Diego Bay. Larger numbers of visitors and employees would increase demand on public services, including member-city police and fire protection services and the HPD. However, the HPD indicated that no new or expanded facilities would be needed as a result of implementation of the proposed PMPU (Nichols pers. comm., Webber pers. comm.). Therefore, buildout of the proposed PMPU would not require new or physically altered government facilities or result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts. Impacts would be less than significant. Further, given that this alternative would result in substantially less overall development and, as such, fewer visitors and employees than the proposed PMPU, the demand on public services could likely be met by the existing staff and equipment of the public service providers and likely would not require the construction of new or expansion of existing police and fire facilities. As such, impacts occurring under this alternative would be less than significant and reduced compared to the proposed PMPU.

Although there would be substantially less development under this alternative than for the proposed PMPU, the timing, duration, location, and extent of possible construction activities, as well as the certainty of the need for new or expanded police facilities other than HPD, are all unknown at this time. Mitigation measures detailed in the proposed PMPU's MMRP would be required where necessary (**MM-PS-1**); however, to effectively implement **MM-PS-1**, a specific location (including surrounding land uses), project timing, and project design specifications for a future expansion or construction of a new police facility must be known. Because these factors are not known at this time, it would be speculative to conclude that impacts would be less than significant, even with implementation of mitigation measure **MM-PS-1**. Moreover, because the police facility may be located outside of the District's jurisdiction, the District would have no authority in this case to require and enforce mitigation measures to lessen any significant impacts. Therefore, similar to the proposed PMPU and for similar reasons, it is reasonably foreseeable that the future construction of any new or expanded police facilities under this alternative potentially would result in significant and unavoidable environmental impacts. Because future development under this alternative would be reduced substantially compared to that which would occur under the proposed PMPU, impacts on police facilities would be reduced compared to the proposed PMPU.

In addition, similar to the proposed PMPU, new or expanded parks and recreational facilities could be developed under this alternative, which could result in similar impacts related to construction and operation of those parks and recreational facilities, even with implementation of mitigation measures. However, there would be fewer improvements related to parks and recreational facilities under this alternative compared to the proposed PMPU. As such, impacts occurring under this

alternative would be significant and unavoidable, but slightly reduced as compared to those occurring under the proposed PMPU.

6.5.3.13 Sea Level Rise

The One-Half Reduced Growth Alternative would result in similar water and land use designations being applied throughout the proposed PMPU area, which could result in similar SLR exposure scenarios identified Tables 4.13-3 and 4.13-4 in Section 4.13, *Sea Level Rise*. Because this alternative could result in substantially less development than the proposed PMPU, potentially it would result in less development being exposed to SLR. Because SLR is a highly site-specific impact, even within a single parcel, flood exposure can vary significantly, and the exact location of future development consistent with this alternative is unknown, it is possible that this alternative could result in similar exposure as the proposed PMPU. However, this alternative would include the same policies related to SLR that are outlined in the proposed PMPU. These policies require, among other things, that the District prepare, and periodically update, an SLR adaptation plan (SR Policy 3.2.3) and that permittees submit site-specific hazards reports to the District that address anticipated coastal hazards over the anticipated life of the development (SR Policy 3.3.1). Other policies require permittees to site and design development to avoid impacts from coastal hazards from projected SLR, considering the anticipated life of the development and, if coastal hazards cannot be completely avoided, to plan, design, and implement adaptation strategies (see SR Policy 3.3.2). Additionally, to reduce the risks posed to neighboring properties and the natural environment from coastal protection devices, policies would require the prioritization of nature-based adaptation strategies, where feasible (SR Policy 3.3.4). If coastal protection devices are used, they must be designed to minimize adverse impacts on local sand supply, recreation, habitat, scenic views, beach width, coastal fill, coastal access, and other Public Trust uses (SR Policy 3.3.10). SLR and increased “storminess” due to climate change may increase wave uprush, which would be analyzed on an individual development basis, as required in SR Policy 3.3.1. Specific design approaches would be reviewed by the District as specific development proposals are submitted for development review. Consistency with these policies would ensure that future development occurring under this alternative would not exacerbate the potential for inundation due to projected SLR or storm surge. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to SLR. SLR impacts related to this alternative would also be less than significant and slightly reduced compared to the proposed PMPU.

6.5.3.14 Transportation, Circulation, and Mobility

Under the One-Half Reduced Growth Alternative, traffic related to employees and visitors for retail/restaurant and hotel rooms would be reduced substantially compared to the proposed PMPU, which would reduce overall VMT compared to the proposed PMPU, specifically in PD2 and PD3. Potential VMT generated by this alternative may still exceed the thresholds identified by land use in Table 4.14-3 in Section 4.14, *Transportation, Circulation, and Mobility*. Specifically, thresholds established for employment-based uses (e.g., hotels) require these uses to achieve a VMT reduction of 15 percent below the regional average, and retail and restaurant uses would allow no increase in total planning district VMT. As such, this alternative likely still would result in significant and unavoidable impacts related to VMT (**Impact-TRA-1** through **Impact-TRA-3**). However, as discussed above under GHG emissions, it should also be noted that under this alternative, the regional demand for hotel rooms would possibly be accommodated in less VMT-efficient areas, given the proposed PMPU area’s proximity to local and regional transit options, as well as the

airport and major visitor-serving attractions and amenities. Visitors staying in the proposed PMPU area would be more likely to walk or use public transit, rather than drive from a more distant hotel, which would serve to reduce regional VMT and associated GHG emissions. In addition, many of the vehicle trips related to the hotel rooms proposed under the proposed PMPU would not be new trips to Downtown because they would simply be shifting trips from existing hotel rooms to the proposed hotel rooms, which would be located closer to visitors' ultimate destinations.

Similar to the proposed PMPU, this alternative would include physical improvements to the transportation infrastructure that seek to increase the accessibility and connectivity of multi-modal infrastructure throughout the tidelands. These changes would be consistent with the goals and policies of the programs, plans, policies, or ordinances related to the circulation system applicable to the proposed PMPU area. Furthermore, similar to the proposed PMPU, final plans for transportation improvement projects would be subject to the review and approval by the applicable city's traffic engineer (for roadway and bicycle facility improvements) or the District (for pedestrian facility improvements) to ensure that any improvement would not result in hazardous design features and provide adequate emergency access. Impacts related to conflicts with plans and policies, hazardous design features, and adequate emergency access would be less than significant, similar to the proposed PMPU.

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on transportation, circulation, and mobility. Future development occurring under this alternative still could result in significant and unavoidable VMT impacts. Overall, however, because this alternative would result in substantially less development and less total VMT, it would result in slightly reduced transportation, circulation, and mobility impacts compared to the proposed PMPU.

6.5.3.15 Utilities and Service Systems

Future development under the One-Half Reduced Growth Alternative would increase demand on utilities throughout the proposed PMPU area. Although this demand would be reduced substantially compared to the proposed PMPU, future development that could occur under this alternative may require new or expanded utilities, the construction of which may result in significant and unavoidable impacts related to land-disturbing activities, even with mitigation (**Impact-UTIL-1**). In addition, given that potential buildout under this alternative could result in up to 1,955 new hotel rooms, as well as additional retail and restaurant space, convention space, and meeting space, all of which would increase demand on water supplies, water supplies may be insufficient to meet the increased demand generated under this alternative, similar to the proposed PMPU (**Impact-UTIL-2**). Similar to the proposed PMPU, incorporation of this alternative into the next UWMP updates, preparation of a water demand analysis, and implementation of water conservation measures would be required for future development occurring under this alternative to ensure that sufficient water supplies exist before a project is approved, and impacts would be less than significant with mitigation (**MM-UTIL-1** through **MM-UTIL-3**). Similar to the proposed PMPU, and although a regional issue, cumulative construction and operational activities could generate solid waste that would exceed capacity at existing landfills (**Impact-C-UTIL-3** and **Impact-C-UTIL-4**). Similarly, site-specific environmental reviews for future development occurring under this alternative would also be required to ensure that sufficient landfill capacity exists prior to project approval (**MM-C-UTIL-1** and **MM-C-UTIL-25**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on utilities and services systems as a result of utility-related land disturbance and a less-than-significant impact related to insufficient water and cumulative impacts related to solid waste facilities after mitigation. Overall, because demand on utilities would be reduced substantially under this alternative, impacts also would be reduced compared to the proposed PMPU, but still would be significant and unavoidable related to land disturbance.

6.5.3.16 Summary of Impacts

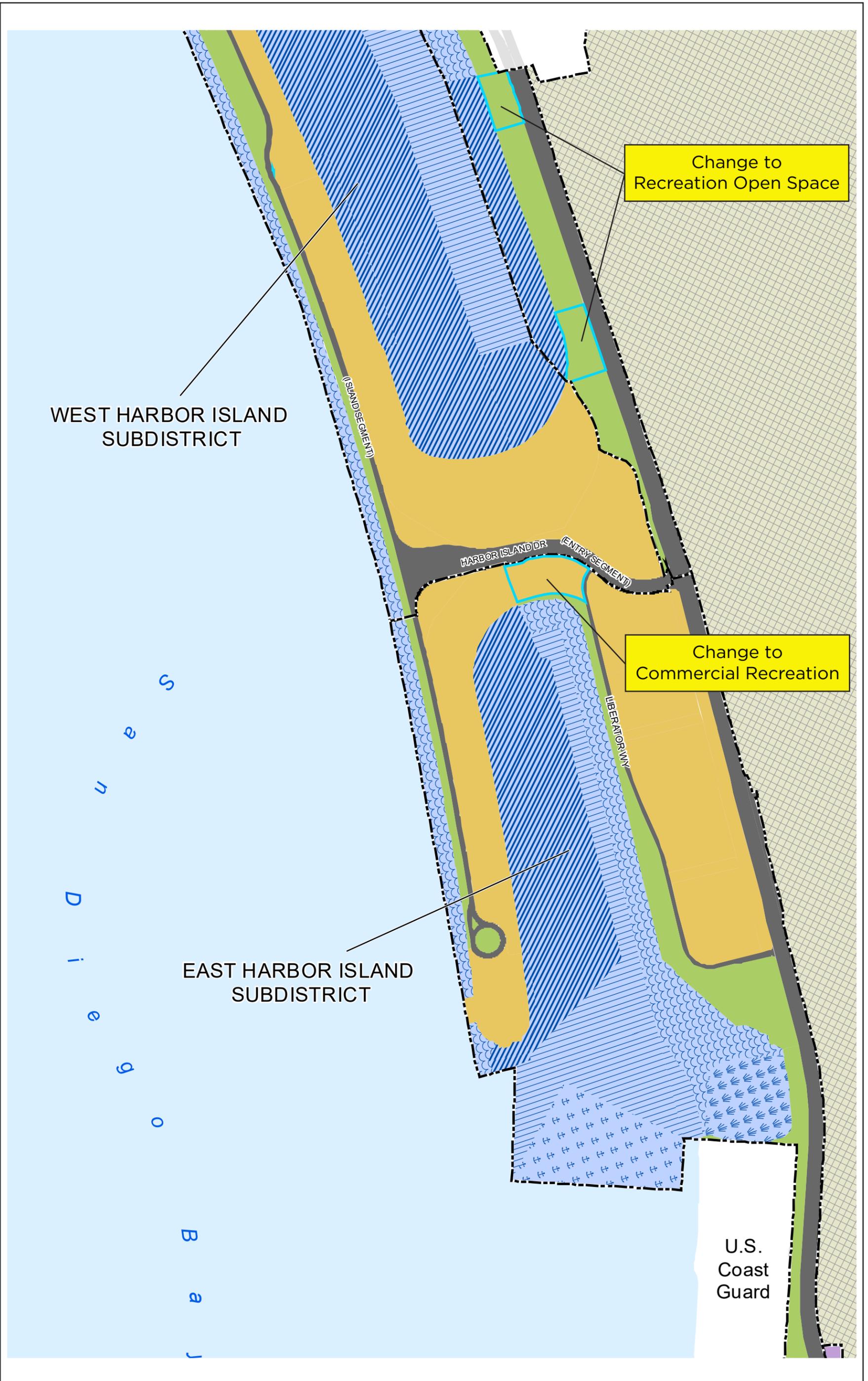
The One-Half Reduced Growth Alternative would substantially reduce impacts related to GHG emissions and public services and recreation. This alternative would reduce impacts related to aesthetics and visual resources, air quality and health risks, biological resources, hydrology and water quality, noise and vibration, traffic, circulation, and mobility, and utilities and service systems.

6.5.4 Analysis of Alternative 4 – Harbor Island Centralized Commercial Recreation Alternative

The Harbor Island Centralized Commercial Recreation Alternative was developed in response to stakeholder input. This alternative is located in the Harbor Island Planning District (PD2) and would include an increase in Recreation Open Space designated land use areas in the Spanish Landing Subdistrict and an increase in Commercial Recreation designated land use areas in the East Harbor Island Subdistrict (see Figure 6-1). Within the Spanish Landing Subdistrict, approximately 2.99 acres of land area proposed as Commercial Recreation in the PMPU instead would be assigned the Recreation Open Space land use designation. Within the East Harbor Island Subdistrict, approximately 2.65 acres of land designated Recreational Open Space instead would be assigned the Commercial Recreation land use designation.

This reallocation of land use designations would allow for the more centralized and contiguous placement of visitor-serving commercial development within the overall planning district, specifically in the East Harbor Island Subdistrict, which potentially would result in lowering total VMT due to proximity to existing and planned visitor-serving commercial development in the surrounding area. Additionally, the reallocation would allow for the preservation of existing park space in the Spanish Landing Subdistrict, which could accommodate the placement of activating features consistent with the Baywide Development Standards and allowances within ROS-designated spaces, as permitted in other subdistricts. This alternative would result in an overall net increase of 0.34 acre of Recreation Open Space areas within the East Harbor Island Planning District and establish continuous shoreline access for the public, while providing additional areas for visitors to recreate and experience the waterfront.

All other proposed water and land use designations and potential development intensities would remain the same as the proposed PMPU under this alternative (see Table 6-2).



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6.5.4.1 Aesthetics and Visual Resources

The Harbor Island Centralized Commercial Recreation Alternative would take place within the same area and planning districts as the proposed PMPU. This alternative would involve similar development intensities as the proposed PMPU within the PMPU area. Under this alternative, the same baywide development standards would be implemented that establish requirements for protecting scenic vista areas and view-corridor extensions. In addition, this alternative would include both the baywide and planning/subdistrict-specific standards that establish requirements related to building height, setback, and setbacks, in order to protect views and visual character of a site and its surroundings. As such, this alternative would result in less-than-significant impacts on scenic vistas and visual character, similar to the proposed PMPU. However, construction activities could involve the use of equipment that could intrude into and temporarily block scenic vistas or view-corridor extensions or adversely affect visual character (**Impact-AES-1** and **Impact-AES-2**), which would require the implementation of mitigation measures similar to those identified for the proposed PMPU (**MM-AES-1** and **MM-AES-2**). Furthermore, like the proposed PMPU, this alternative could also introduce new sources of glare from the introduction of new and taller buildings that use glass curtainwall siding (**Impact-AES-3**). Implementation of mitigation measures that are similar to those identified for the proposed PMPU (**MM-AES-3**), which establish low-reflectivity standards to ensure that these glare impacts are reduced to less-than-significant levels, would be required.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant aesthetic impacts related to glare, but would result in significant and unavoidable impacts related to the potential to interfere with designated scenic vistas or view corridors during construction and the potential to result in substantial degradation of visual character and quality during construction. Because this alternative would involve the same overall development intensities as the PMPU, it still would result in a substantial amount of change to the existing aesthetics within the proposed PMPU area. As such, impacts related to aesthetics and visual resources would be similar to the proposed PMPU.

6.5.4.2 Air Quality and Health Risk

This alternative would introduce the same development intensities as the proposed PMPU and, like the proposed PMPU, may not have been accounted for in SANDAG's regional growth assumptions. Therefore, similar to the proposed PMPU, this alternative would be inconsistent with the RAQS and SIP, which would be a significant impact prior to the implementation of mitigation (**Impact-AQ-1**). Furthermore, given the potential increased development that could occur under this alternative over the existing condition, it is possible that construction emissions could exceed thresholds related to ROG and NO_x emissions (**Impact-AQ-2**). Operational impacts could still exceed thresholds related to ROG, NO_x, and CO emissions, which would result in similar impacts as the proposed PMPU related to a cumulatively considerable net increase of criteria pollutants for which the region is in nonattainment (**Impact-AQ-3**). This impact would remain significant and unavoidable, even after the implementation of mitigation (**MM-AQ-2** through **MM-AQ-8** for **Impact-AQ-2** and **MM-AQ-9** through **MM-AQ-12** for **Impact-AQ-3**). Because this alternative would result in the same overall development intensities, it would be similar compared to the proposed PMPU.

In addition, construction activities under this alternative could increase diesel particulate matter emissions over existing condition levels, which could result in cancer or non-cancer health risks to

sensitive receptors within and adjacent to the proposed PMPU area (**Impact-AQ-4**). Construction (**Impact-AQ-5**) and operational activities could also generate criteria pollutant emissions that exceed thresholds. **MM-AQ-2** through **MM-AQ-8** for **Impact-AQ-4**, and **MM-AQ-9** through **MM-AQ-12** for **Impact-AQ-5** and **Impact-AQ-6** would be implemented. Because the intensity of development occurring under this alternative would be the same as the proposed PMPU, diesel particulate matter and criteria pollutant emissions would be similar. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable air quality impacts, and air quality and health risk impacts occurring under this alternative still would be significant and unavoidable and would be similar compared to the proposed PMPU.

6.5.4.3 Biological Resources

The Harbor Island Centralized Commercial Recreation Alternative would result in construction and operational activities throughout the proposed PMPU area, which, similar to the proposed PMPU, would have the potential to affect sensitive habitat or species or other biological resources adversely. Specifically, landside and waterside improvements under this alternative would include activities such as the construction of new landside structures and the installation of recreational boat slips or aquaculture pens, the construction of which would result in construction noise or increased turbidity that could affect terrestrial and marine resources and various avian species or result in the loss of eelgrass beds. In addition, marine resources could be affected by operation of waterside improvements through increased overwater coverage, the entry of harmful chemicals into waters, alteration of hydrodynamics, or increased recreational vessel activity (**Impact-BIO-1** through **Impact-BIO-15**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts on biological resources with the implementation of mitigation (**MM-BIO-1** through **MM-BIO-11**). This alternative would result in similar impacts and require similar mitigation measures as those identified for the proposed PMPU and similarly would result in less-than-significant impacts after implementation of mitigation. Because of the similar intensity of development, this alternative would result in similar impacts on biological resources compared to the proposed PMPU.

6.5.4.4 Cultural Resources and Tribal Cultural Resources

The Harbor Island Centralized Commercial Recreation Alternative would involve improvements within all planning districts, each of which contain one more known historical resource and built resources that will reach the 50-year age benchmark for consideration as a potential historical resource under CEQA within the horizon year of the proposed PMPU. For these reasons, construction activities associated with this alternative would have the potential to cause substantial adverse change in the significance of a known or yet-to-be identified historical resource (**Impact-CUL-1**). In addition, construction activities associated with implementation of future development under this alternative would involve ground-disturbing activities in areas where known or unknown archaeological resources are present (**Impact-CUL-2**). These activities could damage or destroy these archaeological resources. This alternative would also have the potential to result in significant impacts on tribal cultural resources from future ground-disturbing activities (**Impact-CUL-3**). As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on cultural resources, even with the implementation of **MM-CUL-1** for **Impact-CUL-1**, **MM-CUL-2** for **Impact-CUL-2**, and **MM-CUL-2** and **MM-CUL-3** for **Impact-CUL-3**.

Implementation of this alternative could result in significant and unavoidable impacts on cultural resources. Because this alternative would result in a similar level of overall development to the proposed PMPU, impacts would be similar compared to the proposed PMPU.

6.5.4.5 Geology and Soils

The Harbor Island Centralized Commercial Recreation Alternative would include a similar development scenario as the proposed PMPU, which still would potentially occur within areas mapped with geologic hazards, including ground rupture, liquefaction, strong ground-shaking due to seismic activity, or expansive or unstable soils. In addition, the potential for soil erosion also exists during implementation of this alternative. However, as discussed in Section 4.5, *Geology and Soils*, regulations contained within the CBC, the adjacent cities' municipal codes, and the District's Stormwater Management and Discharge Control Ordinance would ensure that any structures developed under this alternative would identify and mitigate for any geologic hazards existing within, or affecting, any given project site, or reduce the potential for soil erosion. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to geology and soils. Impacts related to geology and soils would be less than significant under this alternative and similar to the proposed PMPU.

In addition, as noted in Section 4.5, PD1, PD3, PD8, PD9, and PD10 contain a geologic formation that has high paleontological sensitivity, and fossil localities have been identified in PD4 and PD10. Because this alternative potentially would involve future development in several of these planning districts and could involve excavation that exceeds 10 feet in depth and requires removal of 1,000 cubic yards or more, this alternative has the potential to adversely affect unique paleontological resources or sites (**Impact-GEO-1**) and would require mitigation (**MM-GEO-1**). Impacts on paleontological resources under this alternative would be less than significant with mitigation and similar compared to the proposed PMPU.

6.5.4.6 Greenhouse Gas Emissions and Energy

The Harbor Island Centralized Commercial Recreation Alternative would involve all of the various GHG emission sources for both construction and operational activities associated with the proposed PMPU.

As indicated in Table 6-1, implementation of the proposed PMPU would result in one significant and unavoidable GHG impact (**Impact-GHG-1**), with the remaining impact (**Impact-GHG-2**) reduced to less than significant with the incorporation of mitigation (**MM-GHG-1**, **MM-GHG-2**, **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-13** and **MM-TRA-1** through **MM-TRA-3**). Given the magnitude of development that could occur under this alternative, it is still likely that this alternative would result in similar significant and unavoidable impacts related to GHG as the proposed PMPU, including exceeding reduction targets (**Impact-GHG-1**). In addition, prior to the implementation of mitigation, future development that could occur under this alternative may not be consistent with the CAP and statewide plans because it would not implement all of the applicable GHG reduction measures (**Impact-GHG-2**). Similar to the proposed PMPU, mitigation measures would be required to ensure that this alternative implements all applicable GHG reduction measures and reduces impacts to less-than-significant levels (**MM-GHG-1**, **MM-GHG-2**, **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-13**, and **MM-TRA-1** through **MM-TRA-3**). Because this alternative would result a similar level of development compared to the proposed PMPU, GHG impacts also would be similar.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant energy impacts with mitigation incorporated (**Impact-EN-1** and **Impact-EN-2**). Energy consumption would also increase compared to existing conditions under this alternative and likely would require similar mitigation measures as those identified for the proposed PMPU in Section 4.6 (**MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, and **MM-AQ-9** through **MM-AQ-12**, **MM-GHG-1**, and **MM-GHG-2** for **Impact-EN-1** and **MM-AQ-9** through **MM-AQ-12**, and **MM-GHG-2** for **Impact-EN-2**), in order to reduce impacts related to the wasteful, inefficient, or unnecessary consumption of energy and consistency with applicable energy use reduction plans to less-than-significant levels. Overall, energy impacts occurring under this alternative would be similar compared to the proposed PMPU, due to the overall similar development intensity that would occur under this alternative.

6.5.4.7 Hazards and Hazardous Materials

The Harbor Island Centralized Commercial Recreation Alternative would involve potential future development throughout the proposed PMPU area, with future development primarily concentrated in PD2 and PD3. Similar to the proposed PMPU, the potential exists to encounter existing known or undocumented contaminated materials (i.e., soil, groundwater, or sediment) or other hazardous materials (e.g., asbestos-containing materials, lead-based paint, polychlorinated biphenyls, organochlorine pesticides) during construction activities, which would be a significant impact that could create a hazard to the public or the environment. It is also possible that future development occurring under this alternative could be located on a site with an active or closed case listed in an environmental database for hazardous materials (**Impact-HAZ-1** through **Impact-HAZ-4**). Mitigation would reduce these impacts to less-than-significant levels (**MM-HAZ-1** and **MM-HAZ-2**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to hazards and hazardous materials with the implementation of mitigation (**MM-HAZ-1** and **MM-HAZ-2**). Because impacts associated with hazardous materials tend to be localized, and this alternative could result in development at the same locations as those that would occur under the proposed PMPU, potential hazards and hazardous materials impacts resulting from this alternative would be less than significant with mitigation incorporated and, because this alternative would result in similar levels of development as the proposed PMPU, impacts also would be similar compared to the proposed PMPU.

6.5.4.8 Hydrology and Water Quality

As described under Section 4.8.3, in Section 4.8, *Hydrology and Water Quality*, numerous Federal, State, and local laws, regulations, and programs govern water quality standards or waste discharge requirements and help ensure that surface- or groundwater quality is not degraded as a result of development projects. These laws, regulations, and programs would apply to any future development projects that are consistent with the water and land use designations and the policies of this alternative and where these development projects propose actions that are governed by these laws, regulations, and programs. Potential landside construction activities occurring under this alternative would be required to comply with the San Diego RWQCB regulations for short-term dewatering, as well as the Construction General Permit for sites that would disturb more than 1 acre of land or the District's JRMP for sites that would disturb less than 1 acre of land. Compliance with these regulations would ensure that landside construction activities under this alternative result in less-than-significant impacts. However, this alternative would involve waterside construction activities, as well, including the removal of existing pilings and piers and construction of new

pilings/piers, moorings, or floating docks, which could affect water quality due to disturbance of localized sediments and increased turbidity. Although waterside construction activities would be required to comply with Clean Water Act Sections 401 and 404, there are areas where known contaminated sediments exist and bottom-disturbing activities may uncover these contaminated sediments; therefore, this alternative has the potential to result in significant and unavoidable impacts on water quality during in-water construction activities.

In addition, operational waterside activities occurring under this alternative, including increased numbers of recreational vessels, would increase the potential for additional vessels using antifoulant copper-based paint for vessel hulls potentially to contribute to existing copper impairments present within PD1, PD2, PD3, PD9, and PD10 and may worsen the existing condition and result in a significant and unavoidable impact (**Impact-WQ-2**). Furthermore, aquaculture could also occur under this alternative, which could result in water quality degradation due to dissolved nitrogen and phosphorus, turbidity, biological oxygen demand, and bacteria (**Impact-WQ-3**). Mitigation would reduce this impact to less than significant (**MM-WQ-9**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on hydrology and water quality. The Harbor Island Centralized Commercial Recreation Alternative has the potential to result in significant impacts, including a significant and unavoidable impact related to copper impairments due to increased recreational boating, which would result in similar impacts compared to the proposed PMPU.

6.5.4.9 Land Use and Planning

Future development allowed under the Harbor Island Centralized Commercial Recreation Alternative would not extend into areas beyond the proposed PMPU area, nor result in water or land use designations not already proposed in the proposed PMPU. This alternative would not result in new roadway alignments or other infrastructure that physically would divide an established community. In general, future development occurring under this alternative would be similar to that which could occur under the proposed PMPU. As such, this alternative would not have the potential to divide an established community and would be consistent with plans, policies, and regulations adopted for the purposes of avoiding or mitigating environmental effects. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to land use and planning. Impacts under this alternative would also be less than significant and similar compared to the proposed PMPU.

6.5.4.10 Noise and Vibration

Construction activities occurring under this alternative could exceed noise thresholds at sensitive receptors and would result in similar significant impacts related to noise and vibration as would occur under the proposed PMPU (**Impact-NOI-1** and **Impact-NOI-2**). In addition, because this alternative involves the same land uses, roadway improvements, and implementation of other amenities, such as mobility hubs, as the proposed PMPU, operational impacts associated with increased traffic noise, ambient parking lot noise, or mechanical noise from operation of aquaculture facilities or marine technology uses would occur under this alternative (**Impact-NOI-3** through **Impact-NOI-10**). As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts related to noise and vibration, and impacts under this alternative potentially still would be significant and unavoidable. Because this alternative would

result in similar development intensities as the proposed PMPU, impacts would be similar to the proposed PMPU.

6.5.4.11 Population and Housing

The Harbor Island Centralized Commercial Recreation Alternative would have the potential to increase the amount of retail/restaurant square footage, hotel rooms, convention center square footage, and other uses that would result in increased employment throughout the proposed PMPU area compared to existing conditions. As discussed in Section 4.11, *Population and Housing*, employment growth anticipated under the proposed PMPU would be within the growth estimates projected by SANDAG and would not result in substantial unplanned population growth in the region. Because future retail and restaurant development occurring under this alternative would be similar to the proposed PMPU, this alternative would result in similar employment growth as the proposed PMPU, which would be within the anticipated employment projections for the region. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to unplanned population growth. Impacts related to substantial unplanned population growth under this alternative also would be less than significant. Because this alternative would result in a similar amount of development as the proposed PMPU, impacts would be similar compared to the proposed PMPU.

6.5.4.12 Public Services and Recreation

The Harbor Island Centralized Commercial Recreation Alternative would increase in hotel rooms and retail/restaurant space, convention space, and recreational boat slips, which would result in an increase in visitors and employees to the Downtown San Diego area and San Diego Bay. Increased numbers of visitors and employees would increase demand on public services, including membership police and fire protection services and the HPD. However, the HPD indicated that no new or expanded facilities would be needed as a result of implementation of the proposed PMPU (Nichols pers. comm.; Webber pers. comm). Therefore, buildout of the proposed PMPU would not require new or physically altered government facilities or result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts. Impacts would be less than significant. Because this alternative would result in similar development intensities as the proposed PMPU, impacts would also be less than significant and similar to the proposed PMPU.

In addition, the timing, duration, location, and extent of possible construction activities, as well as the certainty of the need for new or expanded police facilities other than HPD, are all unknown at this time. Mitigation measures detailed in the proposed PMPU's MMRP would be required where necessary (**MM-PS-1**); however, to effectively implement **MM-PS-1**, a specific location (including surrounding land uses), project timing, and project design specifications for a future expansion or construction of a new police facility must be known. Because these factors are not known at this time, it would be speculative to conclude that impacts would be less than significant, even with implementation of mitigation measure **MM-PS-1**. Moreover, because the police facility may be located outside of the District's jurisdiction, the District would have no authority in this case to require and enforce mitigation measures to lessen any significant impacts. Therefore, similar to the proposed PMPU and for similar reasons, it is reasonably foreseeable that the future construction of any new or expanded police facilities under this alternative potentially would result in significant

and unavoidable environmental impacts. However, with less future development under this alternative, impacts on police facilities would be reduced slightly compared to the proposed PMPU.

This alternative would slightly increase the amount of recreation open space land available within PD2 and allow for greater preservation of this use within the Spanish Landing Subdistrict, which would be a beneficial impact. However, as with the proposed PMPU, the development of new or expanded parks and recreational facilities under this alternative could result in similar impacts related to construction and operation of those parks and recreational facilities, even with implementation of mitigation measures. As such, impacts occurring under this alternative would be significant and unavoidable and similar compared to those occurring under the proposed PMPU.

6.5.4.13 Sea Level Rise

The Harbor Island Centralized Commercial Recreation Alternative would result in similar water and land use designations being applied throughout the proposed PMPU area, which could result in similar SLR exposure scenarios identified Tables 4.13-3 and 4.13-4 in Section 4.13, *Sea Level Rise*. Because SLR is a highly site-specific impact, even within a single parcel, flood exposure can vary significantly, and the exact location of future development consistent with this alternative is unknown, it is possible that this alternative could result in similar exposure as the proposed PMPU. However, this alternative would include the same policies related to SLR that are proposed in the proposed PMPU. These policies require, among other things, that the District prepare, and periodically update, a SLR adaptation plan (SR Policy 3.2.3) and that permittees submit site-specific hazards reports to the District that address anticipated coastal hazards over the anticipated life of the development (SR Policy 3.3.1). Other policies require permittees to site and design development to avoid impacts from coastal hazards from projected SLR, considering the anticipated life of the development, and, if coastal hazards cannot be completely avoided, to plan, design, and implement adaptation strategies (see SR Policy 3.3.2). Additionally, to reduce the risks posed to neighboring properties and the natural environment from coastal protection devices, policies would require the prioritization of nature-based adaptation strategies, where feasible (SR Policy 3.3.4). If coastal protection devices are used, they must be designed to minimize adverse impacts on local sand supply, recreation, habitat, scenic views, beach width, coastal fill, coastal access, and other Public Trust uses (SR Policy 3.3.10). SLR and increased “storminess” due to climate change may increase wave uprush, which would be analyzed on an individual development basis, as required in SR Policy 3.3.1. Specific design approaches would be reviewed by the District as specific development proposals are submitted for development review. Consistency with these policies would ensure that future development occurring under this alternative would not exacerbate the potential for inundation due to projected SLR or storm surge. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to SLR. SLR impacts related to this alternative would also be less than significant; however, because this alternative would result in less overall development than the proposed PMPU, impacts would be similar, although reduced, compared to the proposed PMPU.

6.5.4.14 Transportation, Circulation, and Mobility

Under the Harbor Island Centralized Commercial Recreation Alternative, traffic related to employees and visitors would be similar compared to the proposed PMPU, and the potential VMT generated by this alternative would similarly exceed the thresholds identified by land use in Table 4.14-3 in Section 4.13, *Transportation, Circulation, and Mobility*. Specifically, thresholds established

for retail and restaurant uses would allow no increase in total planning district VMT. As such, this alternative would still result in significant and unavoidable impacts related to VMT because it still would generate an increase in total VMT, and all other significant VMT-related impacts identified for the proposed PMPU still would occur under this alternative (**Impact-TRA-1** through **Impact-TRA-3**). However, as compared to the proposed PMPU, the relocation of visitor-serving commercial designation from Spanish Landing to more a centralized and contiguous placement within the East Harbor Island Subdistrict potentially would result in lowering total VMT due to proximity to existing and planned visitor-serving commercial development in the East Harbor Island subdistrict. So although VMT thresholds still would be exceeded under this alternative, the relocation of visitor-serving commercial from a more isolated area on Spanish Landing to a more centralized location in East Harbor Island likely would result in a slightly lower VMT overall.

Similar to the proposed PMPU, this alternative would include physical improvements to the transportation infrastructure, which seek to increase the accessibility and connectivity of multi-modal infrastructure throughout the tidelands. These changes would be consistent with the goals and policies of the programs, plans, policies, or ordinances related to the circulation system applicable to the proposed PMPU area. Furthermore, similar to the proposed PMPU, final plans for transportation improvement projects would be subject to the review and approval by the applicable city's traffic engineer (for roadway and bicycle facility improvements) or the District (for pedestrian facility improvements) to ensure that any improvement would not result in hazardous design features and provide adequate emergency access. Impacts related to conflicts with plans and policies, hazardous design features, and adequate emergency access would be less than significant, similar to the proposed PMPU.

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on transportation, circulation, and mobility. Future development occurring under this alternative still would result in significant and unavoidable VMT impacts, although total VMT related to PD2 likely would be slightly lower under this alternative than the proposed PMPU. Overall, this alternative would result in slightly reduced transportation, circulation, and mobility impacts compared to the proposed PMPU.

6.5.4.15 Utilities and Service Systems

Future development under the Harbor Island Centralized Commercial Recreation Alternative would increase demand on utilities throughout the proposed PMPU area, and because the remainder of the proposed PMPU potential future development could still occur, and this alternative could result in a similar level of development, this demand would be similar to the proposed PMPU. Future development that could occur under this alternative may require new or expanded utilities, the construction of which may result in significant and unavoidable impacts related to ground-disturbance, even with mitigation (**Impact-UTIL-1**). In addition, given that potential buildout under this alternative could result in up to 3,910 new hotel rooms, a use that tends to consume a substantial amount of water, water supplies may be insufficient to meet the increased demand generated under this alternative, similar to the proposed PMPU (**Impact-UTIL-2**). Similar to the proposed PMPU, incorporation of this alternative into the next UWMP updates, preparation of a water demand analysis, and implementation of water conservation measures would be required for future development occurring under this alternative to ensure that sufficient water supplies exist before a project is approved, and impacts would be less than significant with mitigation (**MM-UTIL-1** through **MM-UTIL-3**). Similar to the proposed PMPU, cumulative construction and

operational activities could generate solid waste that would exceed capacity at existing landfills (**Impact-C-UTIL-3** and **Impact-C-UTIL-4**). Similarly, site-specific environmental reviews for future development occurring under this alternative also would be required to ensure that sufficient landfill capacity exists prior to project approval (**MM-C-UTIL-1** and **MM-C-UTIL-2**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on utilities and services systems as a result of utility-related land disturbance and a less-than-significant impact related to insufficient water, wastewater, or solid waste facilities after mitigation. Because this alternative would result in similar demand on water, wastewater, and solid waste facilities compared to PMPU, utility impacts occurring under this alternative still would be significant and unavoidable related to land disturbance and less than significant associated with demand for water and cumulative impacts related to solid waste facilities, and therefore would be similar compared to the proposed PMPU.

6.5.4.16 Summary of Impacts

Because buildout projections under the Harbor Island Centralized Commercial Recreation Alternative would involve the same development intensities, this alternative would result in similar impacts for all resources compared to the PMPU. However, by moving a portion of the visitor-serving commercial recreation land use designation to East Harbor Island subdistrict, where there is a greater density of similar land uses, VMT would likely be reduced by a small amount. Therefore, impacts on transportation, circulation, and mobility under this alternative would be reduced slightly compared to the proposed PMPU.

6.5.5 Analysis of Alternative 5 – Recreation Open Space Alternative

The Recreation Open Space Alternative was developed in response to stakeholder input. This alternative is located in the Embarcadero Planning District (PD3) and would include the closure to vehicular traffic of North Harbor Drive between Ash Street and Grape Street (i.e., directly adjacent and to the west of the County Administration Center); however, shuttle and emergency access, along with commercial loading access for visitor-serving uses situated along this portion of the Embarcadero, still would be allowed (see Figure 6-2). Vehicular traffic that currently utilizes this segment of North Harbor Drive would be rerouted to Pacific Highway. The closed segment of North Harbor Drive would be converted from Institutional/Roadway to Recreation Open Space and would slightly increase the total acreage of Recreation Open Space in the planning district (approximately 2 acres). The closure of this segment of North Harbor Drive would allow for the establishment of a “festival street,” providing contiguous park space from the County waterfront park on the east to the Embarcadero on the west. Types of activities that could occur under this alternative would be consistent with other Recreation Open Space areas within the tidelands, including, but not limited to, 5K runs/walks, parades, and film, food, and music festivals. All other proposed water and land use designations and potential development intensities would remain the same as the proposed PMPU under this alternative (see Table 6-2).

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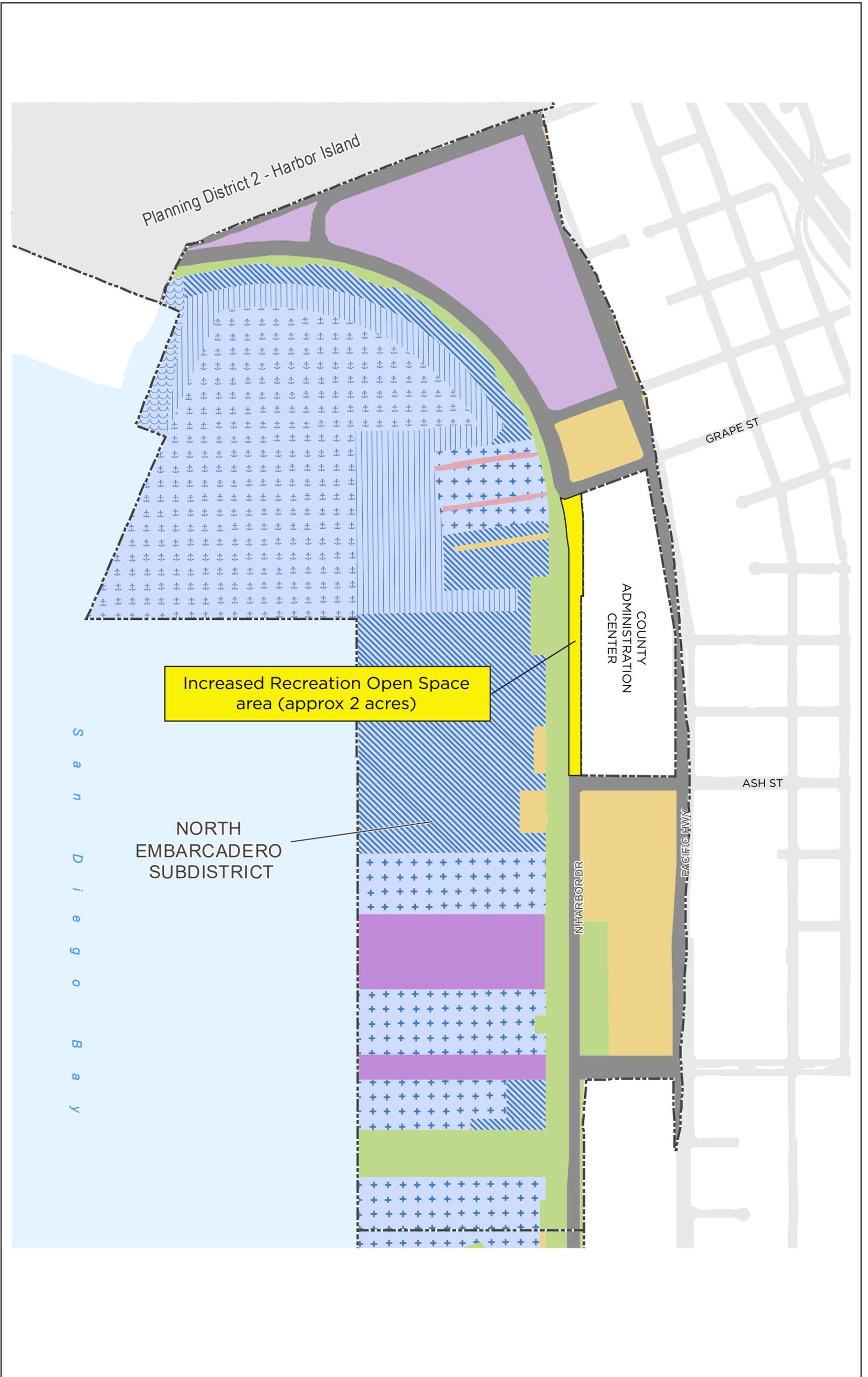


Figure 6-2
Recreation Open Space Alternative
Port Master Plan Update

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6.5.5.1 Aesthetics and Visual Resources

The Recreation Open Space Alternative would take place within the same area and planning districts as the proposed PMPU and involve the same level of overall development as would occur under the proposed PMPU, but would involve the closure of North Harbor Drive between Ash Street and Grape Street to allow for the establishment of a festival street that provides contiguous park space from the County waterfront park on the east to the Embarcadero on the west. Under this alternative, the same baywide development standards would be implemented that establish requirements for protecting scenic vista areas and view-corridor extensions. In addition, this alternative would include both the baywide and planning/subdistrict-specific standards that establish requirements related to building height, setback, and stepbacks in order to protect views and visual character of a site and its surroundings. As such, this alternative would result in less-than-significant impacts on scenic vistas and visual character, similar to the proposed PMPU. In addition, construction activities could involve the use of equipment that could intrude into and temporarily block scenic vistas or view-corridor extensions (**Impact-AES-1** and **Impact-AES-2**), which would require the implementation of mitigation measures similar to those identified for the proposed PMPU (**MM-AES-1** and **MM-AES-2**). Furthermore, like the proposed PMPU, this alternative also could introduce new sources of glare from the introduction of new and taller buildings that use glass curtainwall siding (**Impact-AES-3**). Implementation of mitigation measures that are similar to those identified for the proposed PMPU (**MM-AES-3**), which establish low-reflectivity standards to ensure that these glare impacts are reduced to less-than-significant levels, would be required.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant aesthetic impacts related to glare, but would result in significant and unavoidable impacts related to the potential to interfere with designated scenic vistas or view corridors during construction and the potential to result in substantial degradation of visual character and quality during construction. Because the Recreation Open Space Alternative would result in the same amount of development as the proposed PMPU, this alternative would result in a similar potential to affect scenic vistas and view corridors adversely during construction activities and has a similar potential to introduce new sources of glare within the proposed PMPU area. Therefore, overall, impacts related to aesthetics and visual resources would be similar compared to the proposed PMPU.

6.5.5.2 Air Quality and Health Risk

This alternative would introduce a greater number of hotel rooms, retail/restaurant space, and recreational boat and commercial fishing slips than would occur under the existing PMP and, like the proposed PMPU, may not have been accounted for in SANDAG's regional growth assumptions. Therefore, similar to the proposed PMPU, this alternative would be inconsistent with the RAQS and SIP, which would be a significant impact prior to the implementation of mitigation (**Impact-AQ-1**). Furthermore, given the potential increased development that could occur under this alternative over the existing conditions, it is possible that construction emissions could exceed thresholds related to ROG and NO_x emissions (**Impact-AQ-2**). Operational impacts still could exceed thresholds related to ROG, NO_x, and CO emissions, which would result in similar impacts as the proposed PMPU related to a cumulatively considerable net increase of criteria pollutants for which the region is in nonattainment (**Impact-AQ-3**). This impact would remain significant and unavoidable even after the implementation of mitigation (**MM-AQ-2** through **MM-AQ-8** for **Impact-AQ-2** and **MM-AQ-9**

through **MM-AQ-12** for **Impact-AQ-3**). However, because this alternative would result in similar development, this impact would be similar to the proposed PMPU.

In addition, construction activities under this alternative could increase diesel particulate matter emissions over existing condition levels, which could result in cancer or non-cancer health risks to sensitive receptors within and adjacent to the proposed PMPU area (**Impact-AQ-4**). Construction (**Impact-AQ-5**) and operational (**Impact-AQ-6**) activities could also generate criteria pollutant emissions that exceed thresholds. **MM-AQ-2** through **MM-AQ-8** for **Impact-AQ-4** and **MM-AQ-9** through **MM-AQ-12** for **Impact-AQ-5** and **Impact-AQ-6** would be implemented. However, because the intensity of development occurring under this alternative would be reduced compared to the proposed PMPU, diesel particulate matter and criteria pollutant emissions would also be reduced. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable air quality impacts. Overall, because this alternative would result in the same amount of future development as the proposed PMPU and would result in the same amount of traffic and other pollutant generators, air quality and health risk impacts occurring under this alternative would be similar compared to the proposed PMPU and would be significant and unavoidable.

6.5.5.3 Biological Resources

The Recreation Open Space Alternative would result in construction and operational activities throughout the proposed PMPU area, which, similar to the proposed PMPU, would have the potential to affect sensitive habitat or species or other biological resources adversely. Specifically, waterside improvements under this alternative would include activities such as the installation of recreational boat slips or aquaculture pens, the construction of which would result in construction noise or increased turbidity that could affect marine resources or various avian species or result in the loss of eelgrass beds. In addition, marine resources could be affected by operation of waterside improvements through overwater coverage, the entry of harmful chemicals into waters, alteration of hydrodynamics, or increased vessel activity (**Impact-BIO-1** through **Impact-BIO-15**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts on biological resources with the implementation of mitigation (**MM-BIO-1** through **MM-BIO-11**). This alternative would result in similar less-than-significant impacts and require similar mitigation measures as those identified for the proposed PMPU. This alternative would result in similar impacts on biological resources compared to the proposed PMPU.

6.5.5.4 Cultural Resources and Tribal Cultural Resources

The Recreation Open Space Alternative would involve improvements within all planning districts throughout the proposed PMPU area, which contain one more known historical resource and built resources that will reach the 50-year age benchmark for consideration as a potential historical resource under CEQA within the horizon year of the proposed PMPU. For these reasons, construction activities associated with this alternative would have the potential to cause substantial adverse change in the significance of a known or yet-to-be identified historical resource (**Impact-CUL-1**). In addition, construction activities associated with implementation of future development under this alternative would involve ground-disturbing activities in areas where known or unknown archaeological resources are present (**Impact-CUL-2**). These activities could damage or destroy these archaeological resources. This alternative would also have the potential to result in significant impacts on tribal cultural resources due to future ground-disturbing activities (**Impact-CUL-3**). As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and

unavoidable impacts on cultural resources, even with the implementation of **MM-CUL-1** for **Impact-CUL-1**, **MM-CUL-2** for **Impact-CUL-2**, and **MM-CUL-2** and **MM-CUL-3** for **Impact-CUL-3**.

Implementation of this alternative could result in significant and unavoidable impacts on cultural resources, and impacts would be similar to the proposed PMPU.

6.5.5.5 Geology and Soils

The Recreation Open Space Alternative would include a similar development scenario as the proposed PMPU, which still potentially would occur within areas mapped with geologic hazards, including ground rupture, liquefaction, strong ground-shaking due to seismic activity, or expansive or unstable soils. In addition, the potential for soil erosion also exists during implementation of this alternative. However, as discussed in Section 4.5, *Geology and Soils*, regulations contained within the CBC, the adjacent cities' municipal codes, and the District's Stormwater Management and Discharge Control Ordinance would ensure that any structures developed under this alternative would identify and mitigate for any geologic hazards existing within, or affecting, any given project site or reduce the potential for soil erosion. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to geology and soils. Impacts related to geology and soils would be less than significant under this alternative, and impacts would be similar to the proposed PMPU.

In addition, as noted in Section 4.5, PD1, PD3, PD8, PD9, and PD10 contain a geologic formation that has high paleontological sensitivity, and fossil localities have been identified in PD4 and PD10. Because this alternative potentially would involve future development in several of these planning districts and could involve excavation that exceeds 10 feet in depth and requires removal of 1,000 cubic yards or more, this alternative has the potential to affect unique paleontological resources or sites (**Impact-GEO-1**) adversely and would require mitigation (**MM-GEO-1**). Impacts on paleontological resources under this alternative would be less than significant with mitigation, and impacts would be similar to the proposed PMPU.

6.5.5.6 Greenhouse Gas Emissions

The Recreation Open Space Alternative could result in the same level of development that could occur under the proposed PMPU and would involve all of the various GHG emission sources for both construction and operational activities associated with the proposed PMPU.

As indicated in Table 6-1, implementation of the proposed PMPU would result in one significant and unavoidable GHG impact (**Impact-GHG-1**), with the remaining impact (**Impact-GHG-2**) being reduced to less than significant with the incorporation of mitigation (**MM-GHG-1**, **MM-GHG-2**, **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-12**, and **MM-TRA-1** through **MM-TRA-3**). Given the magnitude of development that could occur under this alternative, this alternative would result in similar significant and unavoidable impacts related to GHG emissions as the proposed PMPU, including exceeding reduction targets (**Impact-GHG-1**). In addition, prior to the implementation of mitigation, future development that could occur under this alternative may not be consistent with the CAP and statewide plans because it would not implement all of the applicable GHG reduction measures (**Impact-GHG-2**). Similar to the proposed PMPU, mitigation measures would be required to ensure that this alternative implements all applicable GHG reduction measures and reduces impacts to less-than-significant levels (**MM-GHG-1**, **MM-GHG-2**, **MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6** through **MM-AQ-13**, and **MM-TRA-1** through **MM-TRA-3**). As such, this alternative would result in similar GHG impacts as the proposed PMPU.

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant energy impacts with mitigation incorporated (**Impact-EN-1** and **Impact-EN-2**). Energy consumption would also increase compared to existing conditions under this alternative and likely would require similar mitigation measures as those identified for the proposed PMPU in Section 4.6 (**MM-AQ-2**, **MM-AQ-3**, **MM-AQ-6**, and **MM-AQ-9** through **MM-AQ-12**, **MM-GHG-1**, and **MM-GHG-2** for **Impact-EN-1** and **MM-AQ-9** through **MM-AQ-12**, and **MM-GHG-2** for **Impact-EN-2**), in order to reduce impacts related to the wasteful, inefficient, or unnecessary consumption of energy and consistency with applicable energy use reduction plans to less-than-significant levels. Overall, energy impacts occurring under this alternative would be similar to the proposed PMPU.

6.5.5.7 Hazards and Hazardous Materials

The Recreation Open Space Alternative would involve potential future development throughout the proposed PMPU area, with future development primarily concentrated in PD2 and PD3. Similar to the proposed PMPU, the potential exists to encounter existing known or undocumented contaminated materials (i.e., soil, groundwater, or sediment) or other hazardous materials (e.g., asbestos-containing materials, lead-based paint, polychlorinated biphenyls, organochlorine pesticides) during construction activities, which would be a significant impact that could create a hazard to the public or the environment (**Impact-HAZ-1** through **Impact-HAZ-3**). It is also possible that future development occurring under this alternative could be located on a site with an active or closed case listed in an environmental database for hazardous materials (**Impact-HAZ-4**). Mitigation would reduce these impacts to less than significant levels (**MM-HAZ-1** and **MM-HAZ-2**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to hazards and hazardous materials with the implementation of mitigation. Because impacts associated with hazardous materials tend to be localized, and because this alternative could result in development at the same locations as those that would occur under the proposed PMPU, potential hazards and hazardous materials impacts resulting from this alternative would be less than significant with mitigation incorporated and would be similar to the proposed PMPU.

6.5.5.8 Hydrology and Water Quality

As described under Section 4.8.3, in Section 4.8, *Hydrology and Water Quality*, there are numerous Federal, State, and local laws, regulations, and programs that govern water quality standards or waste discharge requirements and help ensure that surface- or groundwater quality is not degraded as a result of development projects. These laws, regulations, and programs would apply to any future development projects that are consistent with the water and land use designations and the policies of this alternative and where these development projects propose actions that are governed by these laws, regulations, and programs. Potential landside construction activities occurring under this alternative would be required to comply with the San Diego RWQCB regulations for short-term dewatering, as well as the Construction General Permit for sites that would disturb more than 1 acre of land or the District's JRMP for sites that would disturb less than 1 acre of land. Compliance with these regulations would ensure that landside construction activities under this alternative would result in less-than-significant impacts. However, this alternative would involve waterside construction activities, as well, including the removal of existing pilings and piers and construction of new pilings/piers, moorings, or floating docks, which could affect water quality due to disturbance of localized sediments and increased turbidity. Although waterside construction

activities would be required to comply with Clean Water Act Sections 401 and 404, there are areas where known contaminated sediments exist, and bottom-disturbing activities may uncover these contaminated sediments. Therefore, this alternative has the potential to result in significant and unavoidable water quality impacts during in-water construction activities (**Impact-WQ-1**).

In addition, operational waterside activities occurring under this alternative, including increased numbers of recreational vessels, would increase the potential for additional vessels using antifoulant copper-based paint for vessel hulls potentially to contribute to existing copper impairments present within PD1, PD2, PD3, PD9, and PD10 and may worsen the existing condition and result in a significant and unavoidable impact (**Impact-WQ-2**). Furthermore, aquaculture could also occur under this alternative, which could result in water quality degradation due to dissolved nitrogen and phosphorus, turbidity, biological oxygen demand, and bacteria (**Impact-WQ-3**). Mitigation would reduce this impact to less than significant (**MM-WQ-9**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on hydrology and water quality. Because the Recreation Open Space Alternative has the potential to result in significant and unavoidable impacts, these impacts would be similar to the proposed PMPU.

6.5.5.9 Land Use and Planning

Future development allowed under the Recreation Open Space Alternative would not extend into areas beyond the proposed PMPU area, nor result in water or land use designations not already proposed in the proposed PMPU. This alternative would not result in new roadways or other infrastructure that physically would divide an established community. Although this alternative would include the closure of North Harbor Drive between Ash Street and Grape Street, the extent of the roadway closure would not be so substantial such that it would be considered physically to divide an established community. In general, future development occurring under this alternative would be the same as that which could occur under the proposed PMPU. As such, this alternative would not have the potential to divide an established community and would be consistent with plans, policies, and regulations adopted for the purposes of avoiding or mitigating environmental effects. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to land use and planning. Impacts under this alternative would also be less than significant. Therefore, overall, impacts related to land use and planning would be similar compared to the proposed PMPU.

6.5.5.10 Noise and Vibration

Construction activities occurring under this alternative could exceed noise thresholds at sensitive receptors and result in similar significant impacts related to noise and vibration as the proposed PMPU (**Impact-NOI-1** and **Impact-NOI-2**). In addition, because this alternative involves the same land uses, roadway improvements, and implementation of other amenities, such as mobility hubs, as the proposed PMPU, operational impacts associated with increased traffic noise, ambient parking lot noise, or mechanical noise from operation of aquaculture facilities or ocean-related enterprise uses would occur under this alternative (**Impact-NOI-3** through **Impact-NOI-10**). As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts related to noise, and impacts under this alternative, which potentially still would be significant and unavoidable, would be similar compared to the proposed PMPU.

6.5.5.11 Population and Housing

The Recreation Open Space Alternative would have the potential to increase the amount of retail/restaurant square footage, hotel rooms, convention center square footage, and other uses that would result in increased employment throughout the proposed PMPU area compared to existing conditions. As discussed in Section 4.11, *Population and Housing*, employment growth anticipated under the proposed PMPU would be within the growth estimates projected by SANDAG and would not result in substantial unplanned population growth in the region. Because future development occurring under this alternative would be similar to that which could occur under the proposed PMPU, this alternative would also result in less employment growth than the proposed PMPU and be within the anticipated employment projections for the region. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to unplanned population growth. Impacts related to substantial unplanned population growth under this alternative would be less than significant, and impacts would be similar to the proposed PMPU.

6.5.5.12 Public Services and Recreation

The Recreation Open Space Alternative would result in the same level of development that would occur under the proposed PMPU and result in an increase in visitors and employees to the Downtown San Diego area and San Diego Bay. Increased numbers of visitors and employees would increase demand on public services, including member-city police and fire protection services and HPD resources, and could require construction of new or expansion of existing police facilities and cause an impact on the environment. However, the HPD indicated that any additional demand for new equipment and personnel due to implementation of the proposed PMPU would not require new or expanded facilities (Nichols pers. comm.; Webber pers. comm.). Therefore, buildout of the proposed PMPU would not require new or physically altered government facilities or result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts. Impacts would be less than significant. Because this alternative would result in similar levels of overall development compared to the proposed PMPU, impacts would also be less than significant, and impacts would be similar compared to the proposed PMPU.

Although there would be less development under this alternative than for the proposed PMPU, the timing, duration, location, and extent of possible construction activities, as well as the certainty of the need for new or expanded police facilities other than HPD, are all unknown at this time. Mitigation measures detailed in the proposed PMPU's MMRP would be required, where necessary (**MM-PS-1**); however, to implement **MM-PS-1** effectively, a specific location (including surrounding land uses), project timing, and project design specifications for a future expansion or construction of a new police facility must be known. Because these factors are not known at this time, it would be speculative to conclude that impacts would be less than significant, even with implementation of mitigation measure **MM-PS-1**. Moreover, because the police facility may be located outside of the District's jurisdiction, the District would have no authority in this case to require and enforce mitigation measures to lessen any significant impacts. Therefore, similar to the proposed PMPU, and for similar reasons, it is reasonably foreseeable that the future construction of any new or expanded police facilities under this alternative potentially would result in significant and unavoidable environmental impacts. Because this alternative would result in similar levels of overall development compared to the proposed PMPU, impacts would also be significant and unavoidable and similar compared to the proposed PMPU.

In addition, similar to the proposed PMPU, new or expanded parks and recreational facilities could be developed under this alternative, which could result in similar impacts related to construction and operation of those parks and recreational facilities, even with implementation of mitigation measures. As such, impacts occurring under this alternative would be significant and unavoidable and similar compared to those occurring under the proposed PMPU.

6.5.5.13 Sea Level Rise

The Recreation Open Space Alternative would result in similar water and land use designations being applied throughout the proposed PMPU area, which could result in similar SLR exposure scenarios identified Tables 4.13-3 and 4.13-4 in Section 4.13, *Sea Level Rise*. Because SLR is a highly site-specific impact, even within a single parcel, flood exposure can vary significantly, and the exact location of future development consistent with this alternative is unknown, it is possible that this alternative could result in similar exposure as the proposed PMPU. This alternative would include the same policies related to SLR that are proposed in the proposed PMPU. These policies require, among other things, that the District prepare, and periodically update, an SLR adaptation plan (SR Policy 3.2.3) and that permittees submit site-specific hazards reports to the District that address anticipated coastal hazards over the anticipated life of the development (SR Policy 3.3.1). Other policies require permittees to site and design development to avoid impacts from coastal hazards from projected SLR considering the anticipated life of the development and, if coastal hazards cannot be completely avoided, to plan, design, and implement adaptation strategies (see SR Policy 3.3.2). Additionally, to reduce the risks posed to neighboring properties and the natural environment from coastal protection devices, policies would require the prioritization of nature-based adaptation strategies, where feasible (SR Policy 3.3.4). If coastal protection devices are used, they must be designed to minimize adverse impacts on local sand supply, recreation, habitat, scenic views, beach width, coastal fill, coastal access, and other Public Trust uses (SR Policy 3.3.10). SLR and increased “storminess” due to climate change may increase wave uprush, which would be analyzed on an individual development basis, as required in SR Policy 3.3.1. Specific design approaches would be reviewed by the District as specific development proposals are submitted for development review. Consistency with these policies would ensure that future development occurring under this alternative would not exacerbate the potential for inundation due to projected SLR or storm surge. As indicated in Table 6-1, implementation of the proposed PMPU would result in less-than-significant impacts related to SLR. Under this alternative, impacts would also be less than significant, similar to the proposed PMPU.

6.5.5.14 Transportation, Circulation, and Mobility

Under the Recreation Open Space Alternative, a segment of North Harbor Drive would be closed to vehicular traffic in order to create a continuous recreational area between the County waterfront park and the Embarcadero. Traffic would have to be detoured around this roadway closure, which could create greater congestion on roadways where this traffic would be rerouted. In addition, traffic related to employees and visitors under this alternative would be similar to the proposed PMPU, and the potential VMT generated by this alternative would similarly exceed the thresholds identified by land use in Table 4.14-3 in Section 4.13, *Transportation, Circulation, and Mobility*. As such, this alternative would result in significant and unavoidable impacts related to VMT (**Impact-TRA-1** through **Impact-TRA-3**). Similar to the proposed PMPU, this alternative would include physical improvements to the transportation infrastructure, which seek to increase the accessibility and connectivity of multi-modal infrastructure throughout the tidelands. These changes would be

consistent with the goals and policies of the programs, plans, policies, or ordinances related to the circulation system applicable to the proposed PMPU area. Furthermore, similar to the proposed PMPU, final plans for transportation improvement projects would be subject to the review and approval by the applicable city's traffic engineer (for roadway and bicycle facility improvements) or the District (for pedestrian facility improvements) to ensure that any improvement would not result in hazardous design features and provide adequate emergency access. Impacts related to conflicts with plans and policies, hazardous design features, and adequate emergency access would be less than significant, similar to the proposed PMPU. As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on transportation, circulation, and mobility. Future development occurring under this alternative still could result in significant and unavoidable VMT impacts. Overall, this alternative would result in similar transportation, circulation, and mobility impacts compared to the proposed PMPU.

6.5.5.15 Utilities and Service Systems

Future development under the Recreation Open Space Alternative would increase demand on utilities throughout the proposed PMPU area and, because the remainder of the proposed PMPU potential future development still could occur and this alternative could result in a similar level of development, this demand would be similar to the proposed PMPU. Future development that could occur under this alternative may require new or expanded utilities, the construction of which may result in significant and unavoidable impacts related to ground disturbance, even with mitigation (**Impact-UTIL-1**). In addition, given that potential buildout under this alternative could result in up to 3,910 new hotel rooms, as well as additional retail and restaurant space, convention space, and meeting space, all of which would increase demand on water supplies, water supplies may be insufficient to meet the increased demand generated under this alternative, similar to the proposed PMPU (**Impact-UTIL-2**). Furthermore, because this alternative would replace existing roadway space with recreation space, which would use more water, this alternative could increase demand on water supplies compared to the proposed PMPU. Similar to the proposed PMPU, incorporation of this alternative into the next UWMP updates, preparation of a water demand analysis, and implementation of water conservation measures would be required for future development occurring under this alternative to ensure that sufficient water supplies exist before a project is approved, and impacts would be less than significant with mitigation (**MM-UTIL-1**, **MM-UTIL-2**, and **MM-UTIL-3**). Similar to the proposed PMPU, construction and operational activities could generate solid waste that would exceed capacity at existing landfills (**Impact-C-UTIL-3** and **Impact-C-UTIL-4**). Similarly, site-specific environmental reviews for future development occurring under this alternative also would be required to ensure that sufficient landfill capacity exists prior to project approval (**MM-C-UTIL-1** and **MM-C-UTIL-2**).

As indicated in Table 6-1, implementation of the proposed PMPU would result in significant and unavoidable impacts on utilities and services systems as a result of utility-related land disturbance and a less-than-significant impact related to insufficient water, wastewater, or solid waste facilities after mitigation. Because this alternative would result in similar demand on water, wastewater, and solid waste facilities compared to PMPU, utility impacts occurring under this alternative still would be significant and unavoidable related to land disturbance and less than significant associated with demand for water, wastewater, and solid waste facilities, and impacts would be similar compared to the proposed PMPU.

6.5.5.16 Summary of Impacts

The Recreation Open Space Alternative would result in similar impacts on the proposed PMPU.

6.5.6 Environmentally Superior Alternative

Pursuant to CEQA, EIRs are required to identify the environmentally superior alternative. As shown in Table 6-3, the One-Third Reduced Growth Alternative (Alternative 2) and the One-Half Reduced Growth Alternative (Alternative 3) reduce the same number of significant impacts. However, because Alternative 3 would result in less overall development than Alternative 2, this alternative is the environmentally superior alternative. As provided in the analysis above, there are different tradeoffs for each alternative, depending on the specific resource areas. Individuals and the decision-makers may weigh these resource areas differently.

Table 6-3. Summary Impact Comparison of Proposed PMPU Alternatives

Environmental Resource	PMPU Determination	No Project (Alternative 1)	One-Third Reduced Growth (Alternative 2)	One-Half Reduced Growth (Alternative 3)	Harbor Island Centralized Commercial Recreation Alternative (Alternative 4)	Recreation Open Space (Alternative 5)
Aesthetics and Visual Resources	Significant and Unavoidable	0	-2	-2	0	0
Air Quality and Health Risk	Significant and Unavoidable	-2	-2	-2	0	0
Biological Resources	Less than Significant w/Mitigation	-2	-2	-2	0	0
Cultural Resources and Tribal Cultural Resources	Significant and Unavoidable	-2	-2	-2	0	0
Geology and Soils	Less than Significant w/Mitigation	-2	-2	-2	0	0
Greenhouse Gas Emissions and Climate Change	Significant and Unavoidable	-2	-2	-2	0	0
Hazards and Hazardous Materials	Less than Significant w/Mitigation	-2	-2	-2	0	0
Hydrology and Water Quality	Significant and Unavoidable	-2	-2	-2	0	0
Land Use and Planning	Less than Significant	0	0	0	0	0
Noise and Vibration	Significant and Unavoidable	-2	-2	-2	0	0
Population and Housing	Less than Significant	-1	-1	1	0	0

Environmental Resource	PMPU Determination	No Project (Alternative 1)	One-Third Reduced Growth (Alternative 2)	One-Half Reduced Growth (Alternative 3)	Harbor Island Centralized Commercial Recreation Alternative (Alternative 4)	Recreation Open Space (Alternative 5)
Public Services and Recreation	Significant and Unavoidable	-1	-1	-1	0	0
Sea Level Rise	Less than Significant	-1	-1	-1	0	0
Transportation, Circulation, and Mobility	Significant and Unavoidable	-1	-1	-1	-1	0
Utilities and Service Systems	Significant and Unavoidable	-2	-2	-2	0	0
Total¹	--	-22	-24	-24	-1	0

-2= Reduced; -1= Slightly Reduced; 0 = Similar; +1 = Slightly Greater; +2 = Greater

¹ Lowest score is environmentally superior

Chapter 7

List of Preparers and Agencies Consulted

7.1 San Diego Unified Port District—Lead Agency

7.1.1 Planning and Environment

Jason H. Giffen	Vice President of Planning and Environment
Lesley Nishihira	Planning Director, Planning Department
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7.1.4 Harbor Police Department

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7.1.5 Maritime Department

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Bruce Cummings	Marine Terminal Supervisor, Maritime Operations
Dan Valentine	Manager, Maritime Operations
Mark Taylor	Marine Terminal Superintendent, Maritime Operations
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7.1.6 Office of the General Counsel

Rebecca Harrington, Esq.	Senior Deputy General Counsel
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Michael Hogan, Esq.	Outside Counsel—Hogan Guiney
Margaret Sohagi, Esq.	Outside Counsel---Sohagi Law Group
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7.2 ICF International—EIR Preparation

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7.1 Ascent Environmental—EIR Preparation

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7.2 Traffic Report

7.2.1 Intersecting Metrics

Stephen Cook, P.E.	Project Manager/Sr. Engineer
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7.2.2 Chen Ryan Associates

Jonathan Sanchez	Engineer
Aleksandar Jovanovic	GIS/Figures

7.3 Agencies, Organizations, and Persons Consulted

Agency/Company Name	Contact
Department of the Navy, Naval Base San Diego	Ya-chi Huang, Community Planning & Liaison Officer
State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit (SCH)	N/A
California Public Utilities Commission	Kevin Schumacher
California Air Resources Board	Kelly Lier
San Diego Association of Governments	Susan B. Baldwin, Senior Regional Planner John French, Fire Chief
Imperial Beach Fire Rescue Department	Tom Santos, Assistant Fire Marshal
Coronado Fire Department	Perry Peake, Battalion Chief - Operations/Emergency Preparedness
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BNSF Railway Company	
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The League of Women Voters of San Diego	Kay Ragan and Cathy O'Leary

I hereby certify that the statements furnished above present the data and information required for this report to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signature

November 5, 2021

Date

Ellen Miille, Principal, ICF International

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