DRAFT ENVIRONMENTAL IMPACT REPORT (VOLUME 1 OF 2)

NASSCO Floating Dry Dock Replacement and Waterfront Improvement Project

(UPD #EIR-2023-006) (SCH No. 2022040595)

Prepared for:

PORT of SAN DIEGO
Waterfront of Opportunity

San Diego Unified Port District

April 2023

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April 2023

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Acronyms and Abbreviations

µg/m^3	micrograms per cubic meter
µPa	microPascals
AB	Assembly Bill
ABM	Activity Based Model
ACC II	Advanced Clean Cars II
ACM	asbestos-containing material
AERMOD	Agency Regulatory Model Improvement Committee modeling system
AIA	airport influence area
ALUCP	Airport Land Use Compatibility Plan
AQIA	Air Quality Impact Analysis
AR4	IPCC Fourth Assessment Report
ASCE	American Society of Civil Engineers
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BMP	Best Management Practices
Board	Board of Port Commissioners
BPC	Board of Port Commissioners
C&D	Construction and Demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal/EPA	the California Environmental Protection Agency
Cal/OSHA	the California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CalEMA	California Emergency Management Agency
CalEnviroScreen	the California Communities Environmental Health Screening Tool
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAO	Cleanup and Abatement Order
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CAPP	Community Air Protection Program
CARB	California Air Resources Board
CBC	California Building Code
CCA	California Coastal Act

CCAA	the California Clean Air Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFW	The California Department of Fish and Wildlife
CDO	Cease and Desist Actions
CDP	Coastal Development Permit
CEC	California Energy Commission
CEMP	California Eelgrass Mitigation Policy
CEQA	California Environmental Quality Act
CERCLA	The Comprehensive Environmental Response, Compensation, and Liability Act
CERP	Communities Emissions Reduction Program
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geologic Survey
CH_4	methane
CMP	Congestion Management Program
CNEL	community noise equivalent level
CNPS	The California Native Plant Society's
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COC	contaminants of concern
COMM	Commercial and Sport Fishing
CPF	cancer potency factor
CRHR	California Register of Historical Resources
CTR	California Toxics Rule
CUPA	the Certified Unified Program Agency
CWA	Federal Clean Water Act
dB	decibel
dBA	A-weighted decibel
District	San Diego Unified Port District
DOC	California Department of Conservation
DOT	U.S. Department of Transportation
DPM	diesel particulate matter
Draft EIR	Draft Environmental Impact Report
DTSC	Department of Toxic Substances Control
EFH	Essential Fish Habitat
EIR	Environmental Impact Report

ELAP	Environmental Laboratory Accreditation Program
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
EST	Estuarine Habitat
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FMP	Fishery Management Plan
FTA	Federal Transit Administration
g/s	gram per second
GHG	greenhouse gas
GLC	ground level concentration
GWP	global warming potential
HAPC	Habitat Area of Particular Concern
HFC	hydrofluorocarbons
HHDT	Heavy-Heavy Duty Truck
HI	Hazard Index
HMD	San Diego County Department of Environmental Health's Hazardous Materials Division
HPAH	high molecular weight polynuclear aromatic hydrocarbons
HPD	San Diego Harbor Police Department
HRA	Health Risk Assessments
HREA	Health Risk and Exposure Assessment
Hus	hydrologic units
Hz	Hertz
IHA	Incidental Harassment Authorization
in/s	inches per second
IND	Industrial Service Supply
INRMP	Integrated Natural Resources Management Plan
IPCC	Intergovernmental Panel on Climate Change
JRMP	Jurisdictional Runoff Management Plan
kg	kilograms
LBP	lead-based paint
LDA	light duty auto
LDT1	light duty truck 1
LDT2	light duty truck 2

L_{eq}	equivalent sound level
L_{max}	maximum sound level
L_{min}	minimum sound level
LOS	level of service
LQG	Large Quantity Generator
LUST	leaking underground storage tank
MAR	Marine Habitat
MBTA	Migratory Bird Treaty Act
MCAS	Maritime Clean Air Strategy
mg/kg	milligrams per kilogram
MICR	maximum incremental cancer risk
MIGR	Migration of Aquatic Organisms
MLLW	mean lower low water
MMPA	Marine Mammal Protection Act
MMRP	Mitigation Monitoring and Reporting Program
MPA	marine protected area
MRZ	Mineral Resource Zone
MS4s	Municipal Separate Storm Sewer Systems
MTBE	methyl tert-butyl ether
MUN	Municipal and Domestic Supply
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NASSCO	General Dynamics-NASSCO
NAV	Navigable
NCCP	Natural Communities Conservation Plan
NED	National Elevation Dataset
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO	nitric oxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NTR	National Toxics Rule
O_3	ozone
OEHHA	the California Office of Environmental Health Hazard Assessment
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbon

Pb	lead
PCB	polychlorinated biphenyl
PCE	Tetrachloroethylene
PDP	priority development project
PFCs	perfluorinated carbons
PFMC	Pacific Fishery Management Council
PM	particulate matter
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PMP	Port Master Plan
Port Act	San Diego Unified Port District Act
ppb	parts per billion
PPV	peak particle velocity
PRC	Public Resources Code
project	Floating Dry Dock Replacement and Waterfront Improvement Project
RAQS	Regional Air Quality Strategy
RARE	Rare, Threatened, or Endangered Species
RCRA	Resource Conservation and Recovery Act
REC	Non-contact Water Recreation
Regional Plan	San Diego Forward: The Regional Plan
REL	reference exposure levels
RMP	Risk Management Policy
RMS	root mean square
ROG	regional organic gases
ROW	right-of-way
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SAP	Sampling Analysis Plan
SB	Senate Bill
SCCAT	The Southern California Caulerpa Action Team
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDC	Seismic Design Category
SDFRD	City of San Diego's Fire-Rescue Department
SDG&E	San Diego Gas and Electric Company

SDIA	The San Diego International Airport
SDPD	the City of San Diego Police Department
SEL	The Sound Exposure Level
SF_6	sulfur hexafluoride
SHELL	Shellfish Harvesting
SIP	State Implementation Plan
SLC	California State Lands Commission
SLR	sea level rise
SLT	screening level thresholds
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMAW	Shielded Metal Arc Welding
SO_2	sulfur dioxide
SPCC	Spill Prevention Control and Countermeasure
SPWN	Spawning, Reproduction, and/or Early Development
SQOs	sediment quality objectives
SR-75	State Route 75
STC	sound transmission class
SWAC	surface-weighted average concentration
SWDS	storm water diversion system
SWPPP	Storm Water Pollution Prevention Plan
SWQMP	Storm Water Quality Management Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TBT	mercury, tributyltin
TCE	Trichloroethylene
TCR	Tribal cultural resources
TIS	Transportation Impact Study
TMDL	total maximum daily load
TPA	Transit Priority Area
TSSs	Threshold Siting Surfaces
USACE	U.S. Army Corps of Engineers
USC	the University of Southern California
USCG	U.S. Coast Guard
VHFHSZ	very high fire hazard severity zones
VMT	vehicle miles traveled
VOC	volatile organic compounds
WDR	waste discharge requirements
WILD	Wildlife Habitat

WoS	Waters of the state
WQIP	Water Quality Improvement Plans
ZEVs	zero emission vehicles
µg/kg	micrograms per kilogram

Introduction

This chapter provides a summary of the Draft Environmental Impact Report (EIR) prepared for the Floating Dry Dock Replacement and Waterfront Improvement Project (project) in compliance with the California Environmental Quality Act (CEQA). The San Diego Unified Port District (District) is the CEQA Lead Agency for the EIR and, as such, has the primary responsibility for evaluating the environmental effects of the proposed project and considering whether to approve the proposed project in light of these effects.

As required by CEQA, this Draft EIR: (1) describes the proposed project, including its location, objectives, and features; (2) describes the existing conditions at the project site and nearby environs; (3) analyzes the direct, indirect, and cumulative adverse physical effects that would occur on existing conditions should the proposed project be implemented; (4) identifies feasible means of avoiding or substantially lessening the significant adverse effects of the proposed project; (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 project 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; and (3) Issues to Be Resolved, including significant environmental effects and the consideration of alternatives to the proposed project.

This Draft EIR and its appendices are available for review on the District's website at https://www.portofsandiego.org/public-records/port-updates/notices-disclosures/ceqa-documents. In addition, a hardcopy is available for review by the public during District business hours at the Port Administration Building located at 3165 Pacific Hwy, San Diego, CA 92101.

Project Description

Overview

General Dynamics-NASSCO (NASSCO) is a company that specializes in the design and construction of ships for military and commercial customers. The proposed project evaluated in this Draft EIR is a repair and replacement project for waterfront infrastructure associated with shipbuilding and repair operations at the NASSCO shipyard. The project is designed to address existing deficiencies related to the age and condition of structures, shoreline sloughing, and outdated operational conditions at the existing dry dock. The proposed project includes the following elements:

- Removal and replacement of the existing floating dry dock and construction of supporting infrastructure;
- Improvements to the Repair Complex Wharf;
- Repairs to the quay wall and revetment along stretches of shoreline throughout the NASSCO leasehold, which includes shoreline segments from Lot 20 to Pier 12, floating dry dock approach

pier to Berth 8, Ways to Building Dock, Berth 2 to Berth 3, Berth 4 to Berth 5, and Berth 6 to Navy Base Quay Wall; and

- As-needed structural repair and/or replacement of selected piles at Berths 2, 3, 4, 5, 6, at Pier 12 and the floating dry dock approach pier, and at the Berth 1 Platform.

The majority of the proposed work would take place within the District's jurisdiction; however, the project would involve some activities outside the U.S. Pierhead Line (i.e., installation of west offshore mooring dolphin and temporary repositioning of floating dry dock in "Lot 20" position during vessel launches from the inclined building ways or building dock). NASSCO would apply directly to the California Coastal Commission (CCC) for authorization and entitlements for those project components; however, this Draft EIR analyzes the entire proposed project, as required by CEQA.

Project Location and Existing Setting

The project site is located on and adjacent to the San Diego Bay within the NASSCO leasehold, located at 2798 East Harbor Drive in San Diego, California. Although the NASSCO leasehold encompasses 126 acres of tideland area, project improvements would occur on approximately 2.2 acres of water-side facilities within the leasehold and overall construction- and operation-related activities would occur within an approximately 75-acre area. Figure ES-1 shows the regional location and access to the project site, while Figure ES-2 provides the precise location and boundaries of the project site.

The NASSCO leasehold is situated in a highly industrialized area and is bordered to the north by Harbor Drive, a major north-south transportation corridor that connects the San Diego International Airport, waterfront, Convention Center, Gaslamp District, Ballpark District, and Barrio Logan. The San Diego Bay borders the project site to the south and west. Heavy industry land uses to the northwest of the project site include a ship repair facility operated by BAE Systems. Military land uses to the east and southeast of the project site include Naval Base San Diego. Land uses north of the project site across Harbor Drive and the railroad right-of-way include military, light industry, and commercial and office land uses.

The project site is in an urbanized area that is developed entirely with maritime-related industrial uses. The land use designation for the project site is Marine Related Industrial (Land) and Specialized Berthing (Water). The project site is located within the Harbor Drive Industrial Subarea of Planning District 4, Tenth Avenue Marine Terminal, of the District's certified Port Master Plan.

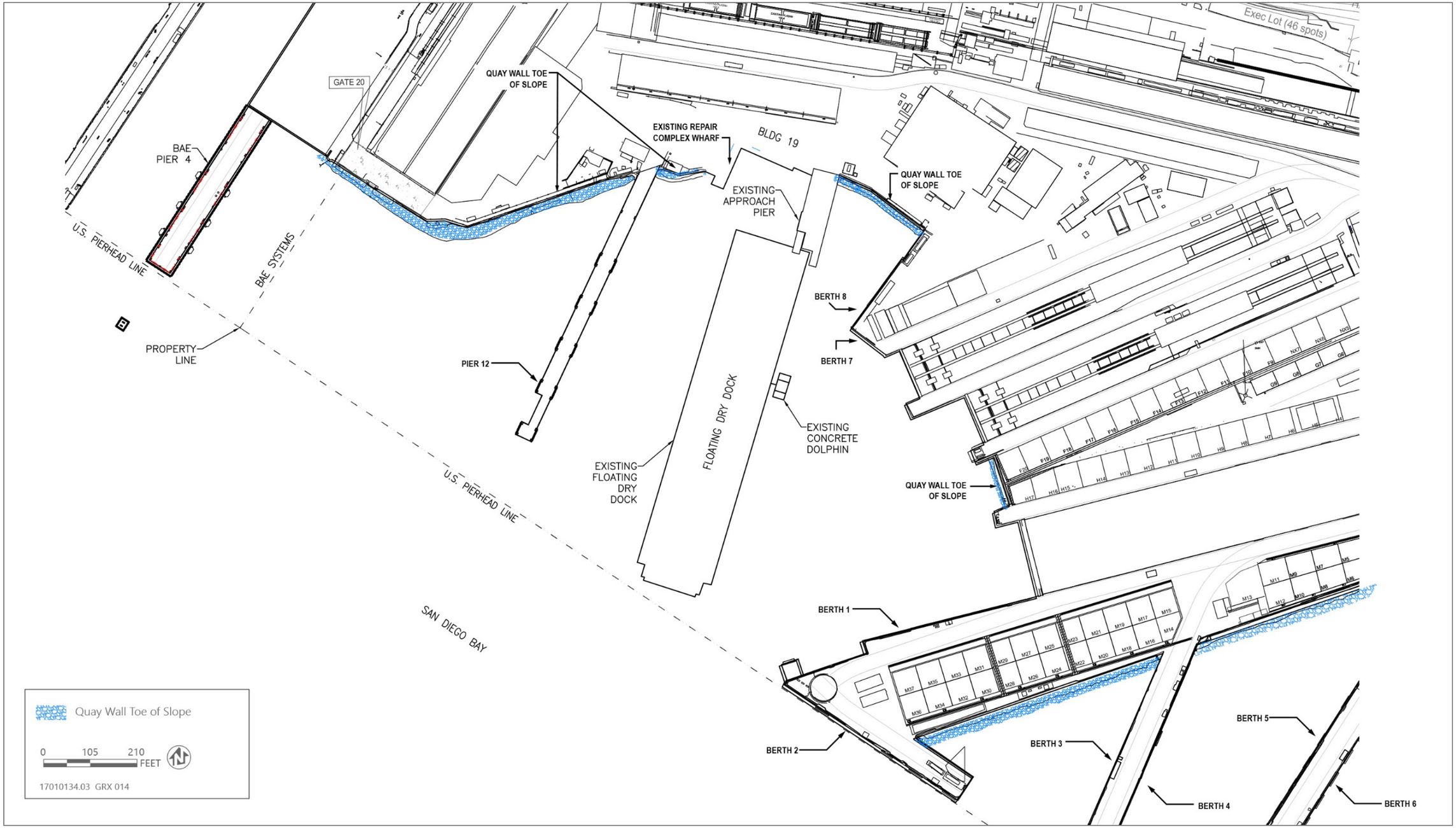
The project site includes the following major components as shown in Figure ES-3: a floating dry dock, the Repair Complex Wharf, quay walls and support piles. The floating dry dock is a structure where vessels are floated in and then the water is drained to allow construction, maintenance, and repair to occur in dry conditions. It is connected to the land by a pile-supported approach pier with integrated mooring dolphin. Mooring dolphins are piles that are used to secure vessels using ropes. The Repair Complex Wharf is a timber wharf that has been previously used as a laydown area for vessel repair and staging. It is temporarily not in use due to safety concerns. The project site's existing quay wall includes a rock revetment in front of the wall that has failed in certain locations. Structural piles support the various in water and wharf-side structures.

Source: adapted by Ascent Environmental in 2021

Figure ES-1. Regional Location

Source: adapted by Ascent Environmental in 2021

Figure ES-2. Project Location Map



Source: Figure by Anchor QEA, LLC in 2021; adapted by Ascent Environmental in 2021.

Figure ES-3. Existing Facilities

Project Objectives

To achieve the need and purpose of the proposed project, the following project objectives have been identified.

1. Meet the needs of the current and anticipated fleets of the military and commercial customers by modernizing the NASSCO shipyard facility through the improvement and/or replacement of existing infrastructure and equipment.
2. Continue the use of existing waterways, available shoreline, and existing shipyard facilities within the Port in an environmentally responsible manner.
3. Enhance environmental protection and meet current safety standards by modernizing equipment and facilities.
4. Preserve jobs by maintaining the physical capacity and technical capability to support the Navy's presence as well as commercial maritime needs in San Diego.
5. Install infrastructure that allows repositioning the floating dock from its home location to a location within the leasehold more efficiently, thereby reducing the amount of time and operations required to release newly constructed or repaired vessels into the water from NASSCO's Ways infrastructure.
6. Demolish and rebuild the Repair Complex Wharf, which has historically been used as a laydown area for vessel repair and staging, but has been temporarily taken out of use due to safety concerns.
7. Repair the existing deteriorating revetment and quay wall to restore the revetment to full functionality, protect against erosion, protect structures on land, and prevent further deterioration.
8. Repair or replace deteriorating piles to ensure the continued stability and safety of existing structures, such as the Approach Pier to the Drydock.

Project Components

The project includes replacement or repair to each of the components described below, including the floating dry dock, Repair Complex Wharf, revetment along the quay wall, and structural piles associated with berths and piers throughout the NASSCO leasehold. The proposed site plan is shown on Figure ES-4.

Component 1 – Floating Dry Dock Replacement and Modification

The existing floating dry dock facilities consist of a floating dry dock, a pile-supported mooring dolphin, and a pile-supported approach pier with integrated mooring dolphin used for vehicle and pedestrian access to the floating dry dock. NASSCO's current shipyard configuration requires the floating dry dock to be relocated from the home position to another berth within the leasehold during vessel launches from the inclined building ways or building dock.

The project includes removal of the existing floating dry dock and replacement with a new floating dry dock of similar characteristics and the same functionality. To support the siting of the new floating dry dock, the existing mooring dolphin would be removed and replaced with four new concrete pile-supported mooring dolphins and associated fender systems.

Two of the mooring dolphins would support the floating dry dock in the home position, and the remaining two mooring dolphins would support the floating dry dock in the temporary "Lot 20" position. The Lot 20 position, located west of Pier 12, would be used for temporary siting of the floating dry dock during vessel launches from the ways and building dock. No changes in operational activities would occur with the exception of reduced tug boat use due to more efficient operating conditions associated with use of the Lot 20 position. To allow for the repositioning of the floating dry dock, a portion of the existing floating dry dock approach pier would be removed and a new fender system would be installed. In addition, structural piles on the existing approach pier would be repaired or replaced. The project would also include a new temporary catwalk and gangway system for the new Lot 20 temporary position. Improvements to the supporting infrastructure are required to comply with current standards and codes.

Overall, Component 1 would result in a net increase in 4,170 square feet of permanent overwater coverage associated with the proposed floating dry dock, mooring dolphins, and fender systems and a net increase in 300 feet of temporary overwater coverage associated with the temporary catwalk and gangway system. There would be a net increase of 201 piles. These components would result in a net decrease in the in-water fill area of 73 square feet and a net increase in fill volume of 629 cubic yards.

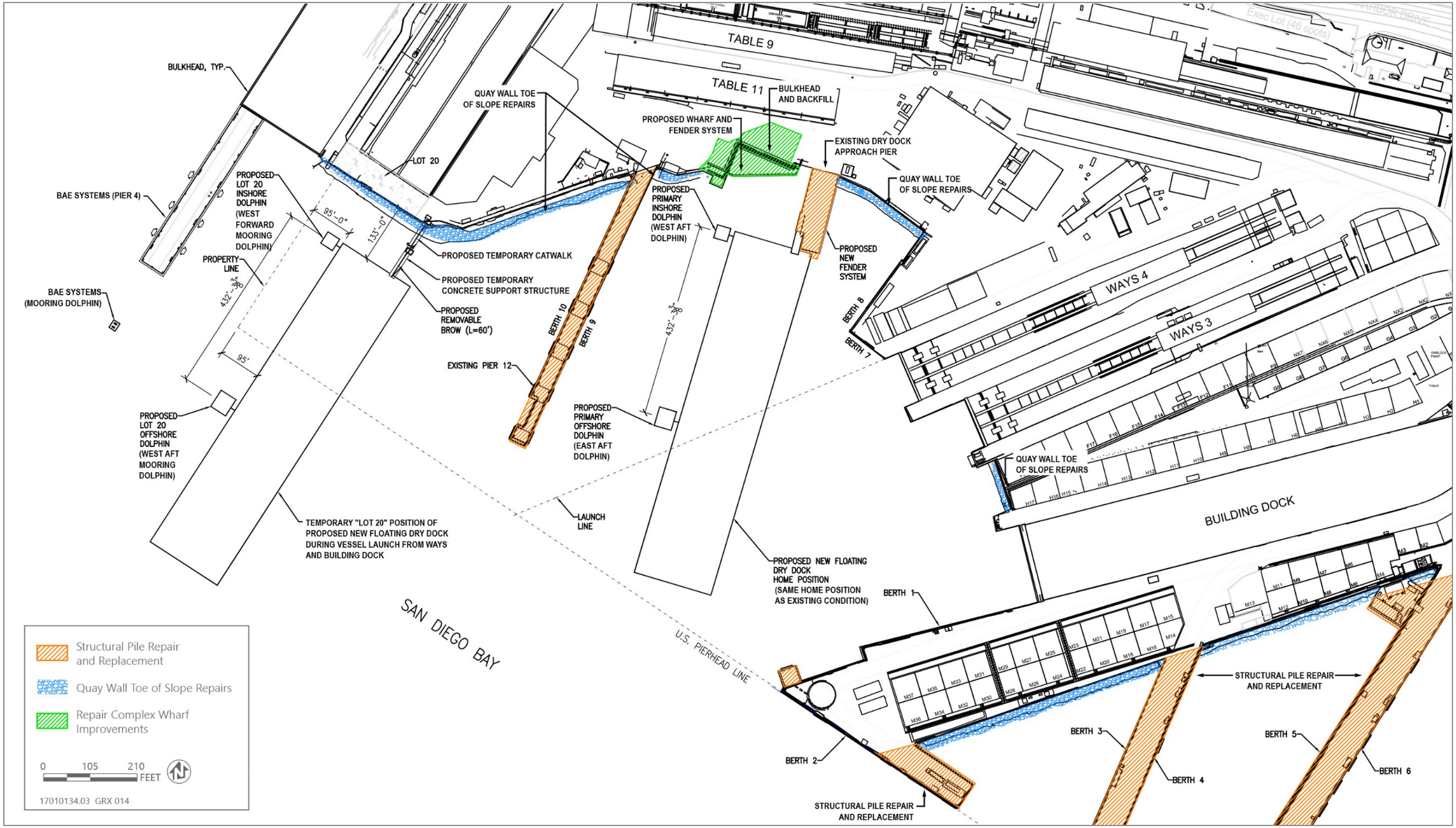
Component 2 – Repair Complex Wharf Replacement

In its current condition, the existing timber-constructed Repair Complex Wharf is not useable to support repair operations. The project includes replacement of the former timber wharf with a larger wharf supported by concrete piles and protected by a wharf fender system. A sheet-piled bulkhead (i.e., retaining wall) would be installed to reinforce the 293-foot shoreline adjacent to the improved wharf.

Overall, Component 2 would result in a net increase in overwater coverage of 6,040 square feet. Approximately 100 existing supporting piles would be removed and disposed, resulting in a net decrease of 22 piles and a net increase in 293 linear feet of sheet pile. These components would result in a net increase in pile area of 272 square feet and pile fill volume of 566 cubic yards. Additionally, there would be a net increase in backfill area of 12,203 square feet and backfill volume of 3,357 cubic yards.

Component 3 – Quay Wall Revetment Repairs and Replacement

Failed revetment and exposed shoreline are present throughout the project site. The project includes repairs to the failed revetments along the 950 linear feet of exposed shoreline between Berth 2 and Berth 5. In addition, the project includes repairs to an additional 1,500 linear feet of exposed shoreline segments, including Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall. Repairs of the revetment would include building up a new rock toe, overlaid with an approximate 9-inch layer of filter stone and 2-foot layer of quarter-ton rock riprap. Grout bags and concrete may also be placed to fill voids on the failed slope. Fill would be underlain with filter fabric. In total, quay wall revetment repairs would occur along approximately 2,450 linear feet within the leasehold, with a backfill area of 53,900 square feet in area and a backfill volume of 7,940 cubic yards.



Source: Figure by Anchor QEA, LLC in 2021; adapted by Ascent Environmental in 2021.

Figure ES-4. Proposed Site Plan

Component 4 – Structural Pile Repair and Replacement

Approximately 957 existing structural piles that support Berths 2, 3, 4, 5, 6, and Pier 12, the floating dry dock approach pier, and the Berth 1 Platform show signs of deterioration, cracking, corrosion, and wear. Approximately 100 piles would be repaired or replaced per year with a total construction duration lasting approximately 10 years. The distribution may change based on the need at the facility, but the total number would not exceed 100 per year and 10 per day. If the condition of the structural piles is beyond repair, the piles would be replaced in kind with the same dimension and material. Overall, Component 4 would result in a net increase in pile fill area of 1,301 square feet and a net increase in pile fill volume of 1,445 cubic yards.

Coverage and Fill Volume Summary

Table ES-1 summarizes net overwater coverage and fill volumes for the project. This table assumes that structural piles would be repaired, not replaced. If repair is infeasible, the replaced pile would match the existing pile and would not result in any net increase in fill or overwater coverage.

Table ES-1 Overwater Coverage and In-water Fill Values

Project Component	Overwater Coverage	Fill Area	Fill Volume
Existing (to be replaced or demolished)			
Floating Dry Dock, Mooring Dolphin, and Approach Pier	144,697 sf	92 sf	214 cy
Repair Complex Wharf	12,600 sf	100 sf[1]	20 cy[1]
Quay Wall	--	53,900 sf	10,700 cy
Structural Piles	--	1,488 sf	1,654 cy
Total Existing	157,297 sf	55,580 sf	12,588 cy
Proposed			
Floating Dry Dock, Catwalk and Removable Brow, Mooring Dolphins and Dolphin Fenders, and Approach Pier Fender	148,867 sf (permanent) 300 sf (temporary)	459 sf	843 cy
Repair Complex Wharf (Sheet Pile Wall and Backfill, Concrete Pad, and Fender System)	18,640 sf	12,003 sf (including backfill and fender piles)	3,357 cy (including backfill and pile fill)
Quay Wall Revetment Repairs and Replacement	--	53,900 sf	Additional 7,940 cy for a total of 18,640 cy
Structural Pile Repair and Replacement	--	2,789 sf	3,099 cy
Total Proposed	167,507 sf (permanent) 300 sf (temporary)	69,151 sf	25,939 cy
Net Total	+10,210 sf (permanent) +300 sf (temporary)	+13,571 sf	+13,351 cy

[1] The pile fill area and pile fill volume of the existing piles at the Repair Complex Wharf are not known because not all piles are accessible until the wharf deck is removed. Current conditions are unsafe to get an accurate count of the number of piles under the Repair Complex Wharf; however, an estimate of 100 piles has been used based on the size of the area.

Construction

All proposed construction elements would be waterside (in-water and/or over water). Most project components (i.e., floating dry dock replacement and modification, Repair Complex Wharf improvements, and quay wall revetment repairs [berths 2-5]) are anticipated to be constructed between 2024 and 2026; however, as-needed quay wall repairs may extend to 2028 and structural pile repair and replacement may extend to 2035. Construction activities would occur 24 hours per day and seven days per week; however, work during night-time hours (between 7:00 p.m. and 7:00 a.m.) would be limited to activities that would not generate disturbing, excessive, or offensive noise. Pile driving activities would only be conducted during daylight hours.

It is anticipated that the following equipment would be required to implement the project: floating deck barge with spud well system; crane for pile installation; tugboat to support crane barge; vibratory and/or diesel impact pile driver for pile installation; floating scows for material shuttling to crane barge; push boats to shuttle personnel and small equipment; concrete pump and boom; portable welding units for overwater welding; and diesel-powered generators for barge power. Existing designated areas at or near the construction site would be utilized for staging, laydown, and construction contractor parking. Contractor equipment and materials would generally be mobilized and demobilized from the water side of the project site and by using a barge. Up to 10 construction contract workers would be present on the construction site each day.

The existing floating dry dock would be sold or dispositioned outside of the State. Non-hazardous construction trash and debris would be sent to approved recycling facilities. A minimum of 65 percent of the construction waste would be recycled. Remaining non-hazardous trash and debris that cannot be recycled would be handled through NASSCO's current trash hauler, Republic Services, and disposed at local landfills located outside the coastal zone. Creosote-treated timber piles would be managed, manifested, and transported to a permitted landfill for disposal. If other hazardous waste is generated, Resource Conservation and Recovery Act (RCRA) and non-RCRA hazardous waste would be removed by NASSCO's current hazardous waste haulers and transported under a waste manifest to an authorized hazardous waste Treatment, Storage, and Disposal Facility.

During construction, best management practices (BMPs) would be implemented to ensure compliance with regulatory agency requirements and permit conditions. BMPs would include measures to help prevent degradation of water quality, avoid releases of construction debris and hazardous materials, limit construction equipment idling and fugitive dust emissions, protect biological resources, and control erosion and sedimentation. These BMPs would be incorporated as conditions of project approval in the Coastal Development Permit.

Operations

Except for the proposed west offshore mooring dolphin that would serve the temporary Lot 20 position, all waterside improvements would occur within the existing NASSCO leasehold. The new floating dry dock and associated infrastructure would enable NASSCO employees to continue their existing shipbuilding and repair operations under safe working conditions. The Repair Complex Wharf is sited within the facility which is predominantly allocated to support ship repair operations. The new Repair Wharf Complex size and configuration would allow for the centralization of materials needed to support ship repair within this area as opposed to other areas throughout the facility. This is anticipated to reduce forklift and truck activity within the facility and reduce the amount of time equipment is in transit. In addition, the new temporary Lot 20 position would improve the efficiency of

NASSCO's shipbuilding operations and reduce the hours tugboats operate because of the mechanical type of mooring system that would be implemented on the new dry dock. The system minimizes the need for mooring lines, which results in a more efficient relocation when launching newly constructed vessel from the Ways and Building Dock. The project would not result in an expansion of the existing use of the site, an increase in shipbuilding and repair operations, or additional employees beyond those needed during construction.

NASSCO would be required to maintain all existing operational and maintenance BMPs in compliance with NASSCO's individual National Pollutant Discharge Elimination System (NPDES) Permit (Order R9-2016-0116) and facility BMP Plan Manual. Stormwater runoff from the NASSCO facility, including the new overwater structures, would be captured and contained in the existing stormwater diversion system for subsequent discharge to the San Diego Metropolitan Sanitary Sewer System.

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 include areas of controversy known to the Lead Agency, including issues raised by agencies and the public. The District posted a Notice of Preparation (NOP) with the County Clerk, in accordance with Section 15082 of the State CEQA Guidelines. The 30-day public review period for the NOP began on January 25, 2023, and ended on February 24, 2023. The NOP and notices of NOP availability were mailed to public agencies, organizations, and interested individuals to solicit their comments on the scope and content of the environmental analysis. The District also held a virtual public scoping meeting on February 16, 2023. The NOP is included as Appendix A of this EIR.

Four comment letters were received during the NOP public review period. The primary issues raised were in regard to air quality; cultural resources; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality; and transportation, circulation, and parking. 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 A of this EIR.

Issues to Be Resolved

Summary of Project Impacts

This Draft EIR examines the potential environmental effects of the proposed project, 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 project were analyzed for the following areas.

- Air Quality and Health Risk
- Biological Resources
- Climate Change, Greenhouse Gas Emissions, and Energy
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration

- Geology and Soils
- Hazards and Hazardous Materials
- Transportation, Circulation, and Parking

Table ES-2, presented at the end of this chapter, provides a summary of the environmental impacts that could result from the proposed project and feasible mitigation measures that would reduce or avoid the significant impacts. For each impact, Table ES-2 identifies the significance of the impact before mitigation, applicable mitigation measures, and the level of significance of the impact after the implementation of mitigation measures.

Pursuant to State CEQA Guidelines Section 15063, the District prepared an Initial Study Environmental Checklist that determined that effects related to aesthetics, agriculture and forestry resources, cultural resources, mineral resources, population and housing, public services, recreation, and tribal cultural resources, utilities and service systems, and wildfire would not be significant. In addition, the District determined through the Initial Study Environmental Checklist that the project would have a less-than-significant impact or no impact on certain issue areas within air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, and transportation. In accordance with State CEQA Guidelines Section 15128, a brief explanation indicating the reasons why the effects on these resources would not be significant is provided in Chapter 5, *Additional Consequences of Project Implementation*. The Initial Study Environmental Checklist is included as Appendix B of this EIR.

Summary of Project Alternatives

The following alternatives are analyzed in detail in Chapter 6, *Alternatives to the Proposed Project*. The primary purpose of the alternatives analysis is to consider and analyze a reasonable range of feasible alternatives in sufficient detail to foster informed decision-making and public participation in the environmental review process. The alternatives to the proposed project are summarized below.

Alternative 1 – No Project/No Build Alternative

The No Project/No Build Alternative is required by CEQA to discuss and analyze potential impacts that would occur if the proposed project was not implemented. Under the No Project/No Build Alternative, the NASSCO shipyard would operate as it currently does until the expiration of the current lease in 2040. None of the proposed project components would be constructed and implemented.

The No Project/No Build Alternative would not address deficiencies related to the age and condition of structures, shoreline sloughing, and operational conditions at the existing dry dock. Specifically, this alternative would retain the existing floating dry dock that has reached the end of its useful life and retain the supporting infrastructure (e.g., mooring dolphins and approach pier) that do not comply with current standards and codes. Additionally, the No Project/No Build Alternative would maintain the current configuration of the shipyard, which requires the floating dry dock to be relocated from the home position to another berth within the leasehold during vessel launches from the inclined building ways or building dock. Therefore, this alternative would not achieve the operational efficiency of repositioning the floating dry dock in the Lot 20 position during vessel launches, which is a shorter distance from the home location than the berth that is currently used. In addition, the Repair Complex Wharf, which is currently in disrepair and provides limited storage and laydown space, would remain in its current condition. The existing failed revetment and exposed shoreline would also be left in its current condition and would remain susceptible to damage from wave action. Lastly, damaged piles

would be retained in their current condition and would remain susceptible to deterioration and instability. Without the project improvements, the NASSCO shipyard would not be able to safely function in supporting various shipbuilding and repair operations.

Alternative 2 – Reduced Overwater Coverage Alternative

Alternative 2 would include all project elements described in Chapter 2, *Environmental Setting and Project Description*, except Component 2 (Repair Complex Wharf Replacement) would be reduced in scale. As shown on Figures 3.5-1 and 3.5-2 in Section 3.5, *Hazards and Hazardous Materials*, a portion of the existing Repair Complex Wharf is located within an area of existing sediment contamination associated with the Shipyard Sediment Site under CAO R9-2012-0024 issued by the San Diego RWQCB. Although remedial activities were completed under the CAO, contaminated sediment under the Repair Complex Wharf could not be removed because the existing structure made the area inaccessible to dredging and, unlike other inaccessible areas within the boundaries of the CAP, sand and gravelly sand cover were not used under the Repair Complex Wharf. See Figure 2-10 in Chapter 2, *Environmental Setting and Project Description*, for an illustration of the changes that are planned to the Repair Complex Wharf as part of the project.

To reduce the potential disturbance to contaminated sediment within the Shipyard Sediment Site, Alternative 2 would only rebuild the Repair Wharf Complex to the same size as the existing condition, which is 12,600 square feet. This would represent an overall reduction in size by approximately 6,000 square feet, reducing overwater structures and shading by approximately the same amount, and reducing the proposed backfill area and volume by approximately 10,000 to 12,000 square feet and 2,000 to 3,000 cubic yards, respectively. It is expected, however, that sheet pile sections would still be required to bolster the existing shoreline and supported by some amount of backfill.

Under this alternative, the pile supported concrete pad would increase by approximately 6,300 square feet (for a total of approximately 12,600 square feet) as it would take the place of the area proposed for backfill under the proposed project. Consequently, while there would be substantially less overwater shading and backfill, this alternative would also require approximately double the number of 24-inch octagonal and 18-inch square precast concrete piles to support the larger concrete pad (12,600 sq ft vs 6,330 sf). Therefore, although the amount of overwater coverage, shading, and bay fill would be decreased, pile driving activities would increase.

The purpose of this alternative is to reduce project impacts related to biological resources, hazards and hazardous materials, and hydrology and water quality. Because this alternative would require a smaller footprint than the proposed project within the Shipyard Sediment Site identified under CAO R9-2012-0024, add less overwater structure coverage, and significantly reduce the amount of backfill added in the bay, it is anticipated to result in reduced impacts on biological resources, hazards and hazardous materials, and hydrology and water quality.

As discussed in Chapter 6, Alternative 2 would reduce project impacts related to air quality and health risk; biological resources; climate change, greenhouse gas emissions, and energy; hazards and hazardous materials; and hydrology and water quality during construction. However, these impacts would not be entirely avoided. Constructing the smaller Repair Complex Wharf and other project components (i.e., improvements to the approach pier, installation of the Lot 20 inshore mooring dolphin, and other pile repair and replacement throughout the project site) would still result in impacts to those resource areas, but to a lesser degree. Further, the reduced size of the Repair Complex Wharf under Alternative 2 would provide limited storage and laydown capabilities

compared to the proposed project. Therefore, Alternative 2 would be less effective of meeting the project objectives (#1, #2, and #6) that include implementing infrastructure improvements that continue the use of available space within the leasehold in support of NASSCO's shipbuilding and repair operations and not completely achieving improved efficiencies to help meet the needs of the current and anticipated military and commercial customers.

Environmentally Superior Alternative

Pursuant to CEQA, the EIR is required to identify the environmentally superior alternative. Although the No Project/No Build Alternative (Alternative 1) reduces the greatest number of impacts, CEQA requires that when the environmentally superior alternative is the No Project/No Build Alternative, another alternative should be identified.

As discussed in Section 6.5.2, the Reduced Overwater Coverage Alternative (Alternative 2) is considered the environmentally superior alternative, and overall impacts on environmental resources would be reduced compared to the proposed project. However, Alternative 2 would not reduce impacts of the proposed project to the extent that the project's less-than-significant impacts would be entirely avoided.

Table ES-2. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
3.1 Air Quality and Health Risk				
Project Impacts				
Conflict with an Applicable Air Quality Plan	Implementation of the proposed project would not conflict with or obstruct implementation of the applicable air quality plans.	LTS	No mitigation is required.	LTS
Result in a Cumulatively Considerable Net Increase of a Criteria Pollutant	Implementation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.	LTS	No mitigation is required.	LTS
Expose Sensitive Receptors to Substantial Pollutant Concentrations	Implementation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.	LTS	No mitigation is required.	LTS
Create Objectionable Odors	Implementation of the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LTS	No mitigation is required.	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Cumulative Impacts				
The proposed project's incremental contribution to cumulative air quality impacts would not be cumulatively considerable and would be less than significant; no additional mitigation specific to cumulative impacts would be required.				
3.2 Biological Resources				
Project Impacts				
Substantial Adverse Effect on any Candidate, Sensitive, or Special-Status Species	**Impact-BIO-1: Construction Noise Impacts on Foraging Behavior of Protected Avian Species.** Construction of the proposed project could result in construction-induced noise impacts that could alter the behavior of protected species. Construction-induced noise impacts from pile driving could disrupt the foraging behavior of the California least tern if construction occurs during the California least tern nesting season (April 1 through September 15). Other sensitive fish-foraging avian species such as brown pelican can similarly be impacted. This impact would be potentially significant.	PS	**MM-BIO-1: Implement Construction Measures to Avoid or Reduce Noise-Related Foraging Impacts on California Least Tern and Other Sensitive Fish Foraging Avian Species.** If pile driving activities occur between April 1st and September 15th, the project applicant shall retain a qualified biologist approved by the District to monitor during pile driving activities. The project applicant 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. These actions shall include the following: 1. For all pile driving activities performed during the California least tern nesting season (April 1st to September 15th), a qualified biologist shall be on site observing for foraging California least terns and other sensitive avian species with potential to occur (e.g., California brown pelican). If any California least terns (or other sensitive avian species) 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:	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			a. Reducing the intensity of pile driving. b. Placing sound dampening panels on pile driving equipment. c. Restricting pile driving to periods when sensitive avian species are not present. 2. A biological monitor shall be on-site during any construction activities that would occur within foraging habitat to ensure CESA-listed species are not agitated, killed, or injured.	
Substantial Adverse Effect on any Candidate, Sensitive, or Special-Status Species (Cont.)	**Impact-BIO-2: Potential Disturbance of Nests Protected by the Migratory Bird Treaty Act and California Fish and Game Code from Construction Noise.** Noise from construction activity could impact species protected under the Migratory Bird Treaty Act and California Fish and Game Code if construction activities occur during the general avian nesting season (February 15 through August 31). For instance, marine dependent avian species such as the black-crowned night heron nest in trees near shore where there 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, this impact would be potentially significant.	PS	**MM-BIO-2: Implement Construction Noise Measures to Avoid or Reduce Noise Impacts on Nesting California Least Tern and Other Sensitive Nesting Marine-Dependent Avian Species.** To avoid impacts on nesting marine-dependent birds, during the breeding season (i.e., April 1st- September 15th), the project proponent shall implement the following measures during construction: 1. The project proponent shall retain a qualified biologist, approved by the District, to perform a marine dependent nesting bird survey within 500 feet of the noise-generating activity 1 week prior to the start of construction utilizing heavy equipment. 2. 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. 3. 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	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			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. 4. If the survey confirms nesting within 500 feet of the disturbance footprint, 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. In addition, if the qualified biologist(s) prepares any subsequent reports, the reports shall be submitted to the District. 5. 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. 6. If sensitive avian species begin nesting within 500 feet 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	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			(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. 7. 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. 8. 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.	
Substantial Adverse Effect on any Candidate, Sensitive, or Special-Status Species (Cont.)	**Impact-BIO-3: Potential Disruption of or Injury to Green Sea Turtles, Marine Mammals, and Fishes During Pile Driving Activities.** In-water construction associated with proposed construction could generate enough underwater noise to physically injure or cause behavioral modification of marine mammals, sea turtles, and fishes from impact hammer or vibratory pile driving occurring 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 could potentially generate	PS	**MM-BIO-3: Implement Noise Reducing Measures During Pile Installation Activities to Avoid Impacts on Marine Mammals, Green Sea Turtles, and Fish.** Prior to and during construction activities involving in-water impact hammer pile installation or vibratory pile installation or removal, the project proponent shall implement marine mammal, green sea turtle and fishes noise reducing measures, which shall include the following requirements: 1. 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 (2022). The impact radius shall be	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	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 potentially significant.		established by determining the largest zone of influence associated with in-water construction activities occurring that workday (Zone of Influence is the area that extends out to Level B harassment area indicated in Table 3.2-1 of the EIR). 2. If the qualified biologist observes any special-status species prior to starting pile installation, the project proponent shall not start work until the special-status species has left the area to be affected. Exceptions may apply if an Incidental Harassment Authorization (IHA) is obtained from NOAA, in which case the IHA will identify those exceptions. 3. Pile driving activities shall only be conducted during daylight hours when biological monitors can visually observe marine mammals. 4. Pile driving shall not exceed 10 piles per day and 1,000 strikes per pile or a combination that does not exceed a total of 10,000 strikes in 1 day. 5. 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.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			6. Installation of an acoustical bubble curtain, isolation casing, or another attenuation method approved by NMFS or CDFW shall be installed if monitoring to the attenuated distance identified in Table 10 (Fishes), Table 11 (Marine Mammals), and Table 12 (Green Sea Turtle) of Appendix F (i.e., *The Port of San Diego NASSCO Floating Drydock and Waterfront Improvement Project Underwater Assessment*, prepared by Illingworth and Rodkin [February 2022]). Otherwise, monitoring shall be required to the distances identified under the unattenuated condition of these same tables. 7. The biological monitor shall note observations of the presence of sensitive marine species, including California least tern, green sea turtles, and marine mammals, within the zone of influence (see Tables 10, 11, and 12 of Appendix F of the EIR). Observations shall include hauled out harbor seals and California sea lions. The biological monitor shall observe the site for 15 minutes prior to all pile driving activities and during all pile driving activities. If sensitive marine species are observed within the zone of influence, during or 15 minutes before pile driving, the biological monitor shall immediately notify the on-site supervisor or inspector and require that pile driving either not be initiated or temporarily cease until the protected species have moved outside of the zone of influence on their own. The biological monitor shall have the authority to stop work at any time due to observed species behavior or uncertainty regarding potential to harm a species due to pile driving activities or noise generated from the activity.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			8. "Shutdown zones" have been established for sensitive marine species. If a sensitive marine species enters the shutdown zone during active pile driving, the biological monitor shall stop pile driving until the protected species exits the shutdown zone. These shutdown zones are provided in Table 3.2-5 of the EIR. 9. If weather or sea conditions restrict the biological monitor's ability to observe sensitive marine species within the zone of influence, then pile driving activities shall cease until conditions improve. 10. The biological monitor shall maintain records of the species, date, and time of any sensitive marine species sightings, as well as species behavior, and communications with the contractor during pile driving. The biological monitor shall submit copies of these records to the District on a weekly basis during construction.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Substantial Adverse Effect on any Candidate, Sensitive, or Special-Status Species (Cont.)	**Impact-BIO-4: Water Quality Impairment Impacts on California Least Tern and California Brown Pelican Foraging.** Construction activities associated with structural pile repair and replacement, quay wall revetment repairs, and the Repair Complex Wharf improvements could increase levels of turbidity in waters within the Bay, which could limit the ability of California least terns and other sensitive fish-foraging avian species to locate prey. Construction activities could 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 waters of the U.S., either from construction equipment, landside construction vehicles, construction vessels, and from partially completed overwater structures. This impact would be potentially significant.	PS	Implement **MM-HAZ-1** through **MM-HAZ-9** under Section 3.5, *Hazards and Hazardous Materials*. Implement **MM-WQ-2** under Section 3.6, *Hydrology and Water Quality*. **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 applicant shall implement the following construction measures in accordance with applicable Federal, State, and local regulations, including but not limited to the RWQCB's enforcement of CWA Section 401 and the applicable NPDES permit conditions, USACE's enforcement of Section 404 and Rivers and Harbors Act Section 10, and the District's enforcement of the Stormwater Management and Discharge Control Ordinance: 1. The project applicant 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. 2. The project applicant shall deploy a turbidity curtain around the pile driving or other sediment-disturbing activity areas to restrict the visible	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			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. 3. If impacts on eelgrass due to water quality cannot be mitigated through contractor education and deployment of silt curtains, the project applicant shall implement mitigation measures for losses to eelgrass in accordance the California Eelgrass Mitigation Policy and with MM-BIO-6.	
Substantial Adverse Effect on any Candidate, Sensitive, or Special-Status Species (Cont.)	**Impact-BIO-5: Loss of Open Water Foraging Habitat from Overwater Structures.** California least tern and other sensitive fish-foraging birds (e.g., pelicans) have the potential to utilize open water habitat within and adjacent to the project site for foraging opportunities. The increase in overwater coverage resulting from overwater structures would reduce	PS	**MM-BIO-5: Implement Overwater Coverage Mitigation in Coordination with the Appropriate Resource Agencies and the District to Compensate for Loss of Open Water Habitat.** Prior to the commencement of construction activities that may result in overwater coverage, the project applicant shall comply with the following: 1. The project applicant shall consult with the appropriate resource agencies, including but not limited to, NMFS, USFWS, RWQCB, and/or USACE,	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	the available open water habitat that is used for foraging by fish-eating avian species. This coverage also results in reduced primary productivity in the water column and the seafloor. This impact would be potentially significant.		regarding mitigation of impacts associated with loss of beneficial uses from overwater coverage, loss of open water habitat function, and shading. The project applicant shall secure all applicable permits for the mitigation of overwater coverage prior to commencement of waterside construction and shall comply with all permit requirements during and after waterside construction. One or more of the appropriate resource agencies may require additional conditions of approval or greater mitigation than specified in this mitigation measure. 2. The project applicant shall implement one of the following mitigation options, or a combination thereof, as determined by the District prior to the issuance of a CDP for the project. These options provide the minimum mitigation for overwater coverage impacts and/or shading impacts. 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 the project at a 1:1 mitigation ratio, subject to the District's review and approval. B. Restore or create an amount of 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 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. (Note, the 1:1 ratio is suitable mitigation for open water impacts. The 1.2:1	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			ratio is appropriate for impacts on eelgrass as identified in MM-BIO-6.) The restoration or creation of eelgrass habitat shall require the project applicant 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 mitigation success criteria. The project applicant 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 applicant may purchase overwater coverage credits to offset the net increase in overwater coverage. D. Subject to the Board of Port Commissioners' approval and findings, the project applicant may purchase an amount of credits from the District's shading credit program established pursuant to BPC Policy 735 equivalent to that of the project's	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			final shading total (i.e., to the satisfaction of the appropriate resource agencies). E. As specified in MM-BIO-6, 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 eelgrass impacted.	
Substantial Adverse Effect on Riparian Habitat or Sensitive Natural Community	**Impact-BIO-6: Potential Water Quality Impairment or Construction-Related Impacts on Eelgrass.** Construction related impacts associated with proposed construction activities could result from increased turbidity from support vessels, equipment, installation of structures and piles, and shading from support vessels, barges, and relocation of the dry dock structure. The operation of vessels over shallow water during construction can decrease light to the seafloor by increasing turbidity from propeller wash or direct contact with the seafloor. 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	PS	Implement **MM-BIO-4**, as discussed above. **MM-BIO-6: Implement Eelgrass Mitigation and Monitoring in Compliance with the California Eelgrass Mitigation Policy.** The project applicant shall comply with all requirements of the California Eelgrass Mitigation Policy (CEMP) (NMFS 2014). If impacts on eelgrass occur based on a comparison of pre- and post-construction eelgrass surveys as specified in this mitigation measure, NASSCO shall retain a qualified marine biologist to develop an eelgrass mitigation and monitoring plan in compliance with the CEMP (NMFS 2014). The mitigation and monitoring plan shall be submitted to the District and NMFS for approval and shall be implemented to compensate for any loss of eelgrass. Specific requirements of this mitigation include the following: • Prior to the commencement of any in-water construction activities, a qualified marine biologist retained by NASSCO and approved by the District shall conduct a preconstruction eelgrass survey. Surveys for eelgrass will be conducted during	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	reaching the plant cells and reduce primary productivity. Additionally, any contact with the seafloor where eelgrass occurs could directly dislodge and remove eelgrass and other vegetation. These construction-related impacts would be significant.		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 applicant 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 CCC, USACE, and San Diego RWQCB. • Within 30 days of completion of in-water construction activities, a qualified marine biologist retained by NASSCO and approved by the District shall conduct a post construction eelgrass survey during the active eelgrass growing season (March 1st – October 31st). 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 postconstruction survey shall evaluate potential eelgrass impacts associated with construction. Upon completion of the postconstruction survey, the qualified marine biologist shall submit the survey report to the District and resource agencies within 30 days. • If impacts on eelgrass are detected, NASSCO shall implement the following: o A qualified marine biologist retained by NASSCO and approved by the District shall develop an eelgrass mitigation plan for in-kind mitigation. The qualified marine biologist shall submit the mitigation plan to the District and NMFS within 60 days following the postconstruction survey.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			○ Mitigation for eelgrass impacts shall be at a ratio of no less than 1.2:1, as required by the CEMP. ○ Mitigation shall commence within 135 days of any noted impacts on eelgrass, such that mitigation commences within the same eelgrass growing season that impacts occur. ○ Upon completing mitigation, the qualified biologist shall conduct mitigation performance monitoring at performance milestones of 0, 12, 24, 36, 48, and 60 months. ○ The qualified biologist shall conduct all mitigation monitoring during the active eelgrass growing season and shall avoid the low growth season (November–February). Performance standards shall be in accordance with those prescribed in the CEMP. ○ The qualified biologist shall submit the monitoring reports and spatial data to the District and NMFS within 30 days after the completion of each monitoring period. The monitoring reports shall include all specific requirements identified in the CEMP. • At least two years of annual post-construction eelgrass surveys shall be conducted during the active eelgrass growing season. The additional annual surveys shall evaluate the potential for long-term impacts from structural shading on eelgrass. If 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	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			avoid protracted mitigation and monitoring through planning for long-term impacts and providing eelgrass transplantation prior to monitoring and evaluation of all impacts.	
Substantial Adverse Effect on Riparian Habitat or Sensitive Natural Community (Cont.)	**Impact-BIO-7: Loss of Marine Habitat from Increased Fill in San Diego Bay.** The project would increase existing fill volume by approximately 13,351 cy over an area of approximately 13,571 sf. These fill impacts would partially occur in unvegetated shallow and moderately deep subtidal habitat areas. Due to the potential loss of marine habitats that are recommended for conservation and enhancement in San Diego Bay, some of which have been historically declining, the increase in fill would be considered a significant adverse impact.	PS	**MM-BIO-7: Implement In-Water Fill Mitigation in Coordination with the Appropriate Resource Agencies and the District to Compensate for Permanent Loss of Unvegetated Shallow and Moderately Deep Subtidal Habitat Resulting from In-Water Fill.** Prior to commencement of construction activities that may result in in-water fill, the project applicant shall comply the following: 1) The project applicant shall consult with the appropriate resource agencies, including but not limited to, NMFS (under the Magnuson-Stevens Act), USFWS (Section 7 through one or more federal permits), RWQCB (under Section 401 of the CWA), and/or USACE (under Section 404 of the CWA and Section 10 of the Rivers and Harbor Act), regarding mitigation of impacts associated with loss of beneficial uses from in-water fill and associated loss of habitat function. The project applicant shall secure all applicable permits for the mitigation of in-water fill prior to commencement of waterside construction, including but not limited to a CWA Section 404 permit and Rivers and Harbors Act Section 10 permit from the USACE and a CWA Section 401 water quality certification from the RWQCB. 2) The project applicant shall implement one of the following mitigation options, or a combination thereof, to the satisfaction of the permitting agencies (USACE and RWQCB). These options provide the minimum mitigation for in-water fill impacts at a 1:1 mitigation ratio. One or more of the	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			appropriate resource agencies may require additional or greater mitigation than specified in these mitigation options: A. Remove an amount of existing overwater coverage, including derelict structures, within San Diego Bay that is equivalent to the proposed project's net increase in the area of in-water fill based on final construction plans. This would replace the area affected by the project at a 1:1 mitigation ratio, subject to the District's review and approval. B. Purchase mitigation credits of in-kind habitat at the future Wetland Mitigation Bank at Pond 20 or other mitigation bank approved by the resource agencies to ensure no net-loss of bay waters due to fill impacts. Prior to any construction activity resulting in the fill impacts, the project applicant shall provide evidence to the District and permitting agencies that the mitigation credits have been purchased. Based on approved final construction plans, the mitigation credits shall compensate for the net increase of fill impacts at a 1:1 mitigation ratio.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Substantial Adverse Effect on Riparian Habitat or Sensitive Natural Community (Cont.)	**Impact-BIO-8: Loss of Eelgrass Productivity from Overwater Coverage and Shading.** The proposed project would permanently increase overwater coverage in the San Diego Bay by 10,210 sf. While only up to 2 square meters is anticipated to be directly shaded from the proposed project (catwalk to the drydock when at the Lot 20 position), any increase in overwater coverage will lead to lower eelgrass productivity due to shading where the overwater structure is above eelgrass. The lost eelgrass productivity effects all higher trophic levels due to the lost production of organic carbon. The loss of eelgrass productivity from overwater coverage and shading would be a significant impact.	PS	Implement **MM-BIO-6**, as described above.	LTS
Substantial Adverse Effect on State or Federally Protected Wetlands	**Impact-BIO-6** and **Impact-BIO-7**, as described above. **Impact-WQ-1**, **Impact-WQ-2**, and **Impact-WQ-3**, as described in Section 3.6, *Hydrology and Water Quality*.	PS	Implement **MM-BIO-4**, **MM-BIO-6**, and **MM-BIO-7**, as described above. Implement **MM -WQ-1** and **MM-WQ-2** as described under Section 3.6, *Hydrology and Water Quality*. Implement **MM-HAZ-10**, as described under Section 3.5, *Hazards and Hazardous Materials*.	LTS
Substantial Interference with the Movement of any Native Resident or Migratory Fish	**Impact-BIO-9: Potential to Substantially Interfere with Wildlife Movement and Substantially Impede the Use of Wildlife Nursery Sites.** Aquatic wildlife, including fish, birds, and marine mammals, likely transit	PS	Implement **MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, MM-BIO-6** and **MM-BIO-7,** as discussed above**.** Implement **MM-HAZ-1** through **MM-HAZ-9**, as discussed under Section 3.5, *Hazards and Hazardous Materials*.	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
or Wildlife Species	periodically through the marine environment in the project site to access foraging and resting habitat elsewhere in San Diego Bay or at sea. The project site also contains eelgrass, which is a nursery area for many commercially and recreationally important finfish and shellfish. The proposed project has the potential to affect eelgrass, open water habitat, and special-status wildlife species during construction. These impacts have the potential to substantially interfere with the movement of fish or other wildlife species or substantially impede the use of native wildlife nursery habitat. Impacts would be significant.			
Conflict with Applicable Policies, Ordinances, or Habitat Conservation Plans	**Impact-BIO-10: Conflict with the San Diego Bay Integrated Natural Resources Management Plan.** Prior to the incorporation of mitigation measures **MM-BIO-1** through **MM-BIO-7**, **MM-HAZ-1** through **MM-HAZ-10**, and **MM-WQ-1** and **MM-WQ-2**, a potential conflict with the Integrated Natural Resources Management Plan could occur, resulting in potential impacts on marine wildlife, sensitive habitat, and water quality.	PS	Implement **MM-BIO-1** through **MM-BIO-7**, as described above. Implement **MM-WQ-1** and **MM-WQ-2**, as described under Section 3.6, *Hydrology and Water Quality*. Implement **MM-HAZ-10**, as described under Section 3.5, *Hazards and Hazardous Materials*.	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Cumulative Impacts				
The proposed project's contribution to cumulative impacts related to biological resources would not be cumulatively considerable because the project would be required to implement mitigation measures **MM-BIO-1** through **MM-BIO-7**, **MM-WQ-1** and **MM-WQ-2**, and **MM-HAZ-1** through **MM-HAZ-10**; no additional mitigation specific to cumulative impacts would be required.				
3.3 Greenhouse Gas Emissions and Energy				
Project Impacts				
Generate Greenhouse Gas Emissions That May Have a Significant Effect on the Environment	The proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts would be less than significant.	LTS	No mitigation is required.	LTS
Conflict with an Applicable Plan, Policy, or Regulation for Reducing Greenhouse Gas Emissions	The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.	LTS	No mitigation is required.	LTS
Result in Significant Environmental Impacts from Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources or Conflict with	Implementation of the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy that could result in potentially significant environmental effects, nor would it conflict with state and local renewable energy and energy efficiency plans.	LTS	No mitigation is required.	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Plans for Renewable Energy or Energy Efficiency				
Cumulative Impacts				
The proposed project's incremental contribution to cumulative impacts related to GHG emissions and energy consumption would be less than cumulatively considerable; no additional mitigation specific to cumulative impacts would be required.				
3.4 Geology and Soils				
Project Impacts				
Cause Substantial Adverse Effects Involving Seismic-Related Ground Failure	**Impact-GEO-1: Potential for Project Structures to Cause or Exacerbate Geologic Hazards from Seismic-Related Ground Failure, including Liquefaction.** Site-specific design and construction recommendations were not provided for the 1,500 linear feet of shoreline repairs (from Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall) because geologic conditions were not specifically evaluated in that area. Without proper geotechnical engineering, the proposed structures may not be designed and installed to withstand and avoid causing or exacerbating geologic hazards and the as-needed shoreline repairs would have potential to result in a significant impact.	PS	**MM-GEO-1: Require a Final Geotechnical Investigation Prior to Commencing As-Needed Shoreline Repairs.** Prior to the issuance of a CDP for the project, the project applicant shall prepare and submit to the District a final geotechnical investigation of any shoreline repairs from Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall. The applicant shall incorporate all recommendations from the supplemental geotechnical investigation into the project design to ensure that all structures are engineered to specifications based on site-specific geotechnical conditions. and implementation of the recommendations shall be required as a condition of approval of the CDP.	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Result in Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse from Being Located on Unstable Geologic Units or Soils	**Impact-GEO-2: Potential for project structures to be located on unstable geologic units or soils and result in landslide, lateral spreading, subsidence, liquefaction, or collapse.** Site-specific design and construction recommendations were not provided for the 1,500 linear feet of shoreline repairs (from Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall) because geologic conditions were not specifically evaluated in that area. Without proper geotechnical engineering, the proposed structures may not be designed and installed to withstand and avoid causing or exacerbating geologic hazards from geologic unit or soil instability and the as-needed shoreline repairs would have potential to result in a significant impact.	PS	Implement **MM-GEO-1**, as discussed above.	LTS
Cumulative Impacts				
The proposed project's contribution to cumulative impacts related to geology and soils would not be cumulatively considerable because the project would be designed and constructed in accordance with recommendations from the Project's Geotechnical Investigation (Appendix I) and any supplemental geotechnical investigations required by **MM-GEO-1**; no additional mitigation specific to cumulative impacts would be required.				
3.5 Hazards and Hazardous Materials				
Project Impacts				
Create a Significant	Implementation of the proposed project would not create a significant	LTS	No mitigation measures are required.	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Hazard Through the Routine Transport, Use, or Disposal of Hazardous Materials	hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.			
Create a Significant Hazard Through Reasonably Foreseeable Upset or Accident Conditions	**Impact-HAZ-1: Accidental Release of Hazardous Materials into San Diego Bay.** Hazardous materials could be accidentally released into the San Diego Bay during construction activities, which could result in a potentially significant impact to the public and wildlife.	PS	**MM-HAZ-1: Secondary Containment Structures.** The project applicant shall require its contractor to ensure that oils and fuels are contained in secondary containment structures during any demolition or construction activities so that spills and leaks are contained and prevented from entering the San Diego Bay. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities. **MM-HAZ-2: Hazards-related Worker Training.** Prior to commencing any demolition or construction activities, the project applicant shall require its contractor to provide training to construction workers on specific task areas, including potential hazards resulting from accidental oil and/or fuel spills, and proper equipment operation. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities. **MM-HAZ-3: Equipment Inspection.** Prior to commencing any demolition or construction activities, the contactor and equipment operators shall conduct	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			equipment inspections prior to use to identify and address wear, faulty parts, and leaks. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities. **MM-HAZ-4: Proper Equipment Instrumentation.** Prior to commencing any demolition or construction activities, the project applicant shall require its contractor to identify required instrumentation for each piece of equipment to avoid spillage of material from the barge. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities. **MM-HAZ-5: Hazardous Materials Monitoring.** Prior to commencing any demolition or construction activities, the project applicant shall require its contractor to assign construction personnel to visually monitor for oil and fuel spills during construction. If spilled oil or fuel is detected, all equipment shall be shut down and the source of the spill shall be identified, contained, and reported. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			MM-HAZ-6: Oil/Spills Kits. Prior to commencing any demolition or construction activities, the project applicant shall require its contractor to inform construction workers as to where oil/fuel spill kits are located, how to deploy the oil-absorbent pads, and proper disposal guidelines. The barge shall have a full complement of oil/fuel kits on-board throughout the construction period to allow for quick and timely implementation of spill containment. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities. **MM-HAZ-7: Barge Loading Procedures.** Prior to commencing any demolition or construction activities, the project applicant shall require its contractor to identify barge load limits and loading procedures and shall mark the appropriate draft level on the materials barge hull. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities. **MM-HAZ-8: Removed Pile Placement.** When placing pulled and removed piles and debris in the barge, the project applicant shall require its contractor to employ a flattop barge with containment walls and "skip tubs" to prevent any sediment, wood, or metal debris from falling into the water. The contractor shall locate the barge as close to shore as possible when transferring materials and/or debris on and off of the work barge. If	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			necessary, traps shall be utilized to prevent debris from falling into the water. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities. **MM-HAZ-9: Removed Material Clean-up. The project applicant shall require its contractor to clean up marine growth from removed material before disposal.** The project applicant shall also require its contractor to clean up debris generated from construction activities. The contractor shall restore any piers utilized for materials staging to pre-construction conditions. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.	
Create a Significant Hazard Through Reasonably Foreseeable Upset or Accident Conditions	**Impact-HAZ-2: Waterside Potential to Encounter Hazardous Materials in Sediment in Previously Inaccessible Areas.** The Year 5 Post-Remedial Monitoring Progress Report (February 2022) and the subsequent Exceedance Investigation and Characterization Study Report (May 2022) indicate that the remedial goals regarding sediment chemistry, toxicity, and bioaccumulation levels were achieved in the South Site, which	PS	Implement **MM-WQ-1** and **MM-WQ-2**, as described under Section 3.6, *Hydrology and Water Quality*. **MM-HAZ-10: Implement a Sediment Management Program.** This mitigation measure requires the project applicant to prepare and implement a Sediment Management Program to avoid or reduce the potential impacts that may occur from the project's in-water construction activities disturbance of existing sediment contamination. The project's in-water construction activities will occur within areas subject to CAO R9-2012-0024 and are subject to the regulatory jurisdiction of the RWQCB and the USACE. The project applicant	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	is where the proposed project is located. However, in-water construction activities, such as pile removal and installation of new and replacement piles that occur within sediment in areas that were inaccessible to remedial dredging associated with the CAO due to intervening structures would potentially encounter and disturb contaminated sediments that could not be previously dredged. These areas include the existing Drydock Approach Pier as well as the area underneath the Repair Complex Wharf. Disturbance of the cover material placed at the Drydock Approach Pier (shown in Figure 3.5-2) and along the existing revetment (shown in Figure 3.5-3) as part of the CAO remedy as well as activity underneath the Repair Complex Wharf would potentially expose the underlying contaminated sediment and redistribute COCs into the water column and across the exposed bay floor. As a result, potential adverse impacts could occur on benthic communities, bottom foraging fish, and/or plankton. Therefore, sediment disturbance within the areas identified above would be considered a significant impact.		must obtain a CWA Section 404 permit and a Rivers and Harbor Act Section 10 permit from the USACE and a CWA Section 401 water quality certification from the RWQCB before commencing in-water construction activities. Therefore, the Sediment Management Program shall be prepared in consultation with the RWQCB and the USACE and must be consistent with the requirements of the Section 404 and Section 10 permits issued by the USACE and the Section 401 water quality certification issued by the RWQCB for the project. Prior to the commencement of any in-water demolition or construction activities, the project applicant shall retain a Qualified Professional, approved by the District, with substantial experience (i.e., more than 5 years) in marine sediment contamination, sediment sampling, and contamination remediation. The Qualified Professional shall prepare and oversee the implementation of a Sediment Management Program for portions of the project site where in-water construction activities have the potential to disturb sediment. The Sediment Management Program, which shall be the responsibility of the project applicant to implement, shall be in effect throughout the duration of waterside construction activities for the proposed project. The Sediment Management Program shall include the following elements, each of which have specific timing mechanisms as identified in the description of each element below: 1. **Sampling and Analysis Plan (SAP).** Prior to any in-water demolition or construction that may potentially disturb sediment, the Qualified Professional shall (1) delineate the area of potential disturbance (Disturbance Area); (2) develop a Sampling and Analysis Plan (SAP) that includes pre-	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			construction and post-construction sediment sampling; and (3) perform sediment sampling. The SAP, which shall include a Quality Assurance/Quality Control (QAPP) with Standard Operating Procedures (SOPs), shall apply to the entire project sediment disturbing activities and shall set forth the specific methodology to be used, the locations where sampling would occur, and proper decontamination and disposal procedures for both pre-construction and post-construction sampling and analysis. The sediment samples shall be tested for the presence of copper, mercury, tributyltin (TBT), polychlorinated biphenyls (PCBs), and high molecular weight polynuclear aromatic hydrocarbons (HPAHs), which were the primary COCs identified by the RWQCB in the CAO R9-2012-0024. In consultation with the RWQCB, the sampling area and sampling methodology shall identify sample locations determined to be appropriate to adequately characterize any Disturbance Area associated with the proposed project, including all areas that were not dredged as part of the CAO remediation activities because they were inaccessible but will become accessible after project implementation and will be disturbed by the project. All sediment sampling must occur prior to sediment-disturbing construction activity and shall be performed in accordance with the requirements of the SAP. The SAP must be submitted to the RWQCB and the District for review and approval, and evidence of the RWQCB's approval must be submitted to the District for verification.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			2. **Sediment Characterization Report.** After completion of the preconstruction sampling, and prior to in-water construction, the Qualified Professional shall prepare a Sediment Characterization Report delineating the vertical and lateral extents and concentrations of the project site's COCs in areas where pile driving or removal and other sediment-disturbing activities are proposed as part of this project. The Sediment Characterization Report shall be based on the pre-construction sediment sampling performed per the SAP. The project applicant shall submit the Sediment Characterization Report to the RWQCB and the District for approval as representative of existing sediment conditions in the Disturbance Area. If pre-construction sampling occurs incrementally as different phases or areas are planned for disturbance, then the Qualified Professional shall prepare technical memos documenting the different phases of sampling, which shall be submitted for review to the District and RWQCB as data is collected. 3. **Sediment Management Plan.** The Qualified Professional retained by the project applicant shall prepare a Sediment Management Plan based upon the findings of the Sediment Characterization Report described above in consultation with and subject to the approval of the RWQCB and the District. Once approved, the Sediment Management Plan shall be implemented by the project applicant and shall be subject to regulatory oversight of the RWQCB and the District. The Sediment Management Plan shall describe in detail the required actions that will be employed when disturbing sediment in the Disturbance Area to prevent waterside	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			construction activity from creating contamination or exacerbating existing sediment contamination conditions documented in the Sediment Characterization Report. The Sediment Management Plan shall consider and be consistent with the project requirements specified in mitigation measures **MM-HAZ-1** through **MM-HAZ-9**, which include several BMPs to avoid accidental releases into the Bay waters, **MM-WQ-1**, which requires a water quality monitoring plan, and **MM-WQ-2**, which requires implementation of several water quality best management practices (BMPs), including specific requirements for sediment disturbing activities such as pile driving. 4. **Post-Construction Sampling and Analysis.** At the conclusion of construction activities within a Disturbance Area, the Qualified Professional shall conduct post-construction sampling and analysis in accordance with the SAP (previously prepared in Step 1 above) to determine if in-water sediment disturbance activities resulted in COCs above the preconstruction levels documented in the Sediment Characterization Report. The results of the post-construction sampling and analysis shall be submitted to the RWQCB and the District, within 30 days after concluding the sampling. 5. **Remediation.** If the results of the post-construction sampling show that COC levels exceed the levels identified from the pre-construction sampling, implementation of corrective measures to restore COC levels to the levels at or below those observed in the pre-construction sampling shall be required. However, the project shall not be required to mitigate to contamination levels lower than pre-construction sampling levels to comply with this mitigation	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			measure. These remedial actions, which shall be subject to the RWQCB's review and concurrence, may include, and may not be limited to, dredging and/or sand cover. The RWQCB shall also review the measures necessary to mitigate any potential significant effects of the remedial actions, which may include the mitigation measures incorporated in the Final EIR for the Shipyard Sediment Remediation Project and included in the MMRP, including, but not limited to, the required water quality-related mitigation measures (Mitigation Measures 4.2.1 [Automatic Monitoring of Dredging], 4.2.2 [Best Management Practices], 4.2.3 [Floating Silt Curtains Around Dredging], 4.2.4 [Water Quality Monitoring During Remedial Actions], 4.2.5 [Install Spill Plate], 4.2.6 [Clamshell Bucket Best Practices], 4.2.7 [Proper Design of Sand Cover], 4.2.8 [Controlled Placement of Sand Cover], 4.2.9 [Dredging Management Plan], 4.2.10 [Dewatering Containment Area], 4.2.11 [Avoiding Breach of Dewatering Pad], 4.2.12 [Preparation of a SWPPP], 4.2.13 [Discharge to Sanitary Sewer Requirements], and 4.2.14 [Source and Treatment Control Dredging, Transport, and Disposal Activities) and hazards materials-related (Mitigation Measures 4.3.1 [Secondary Containment], 4.3.2 [Dredging Management Plan], 4.3.3 [Contingency Plan], 4.3.4 [Health and Safety Plan], 4.3.5 [Communication Plan], 4.3.6 [Sediment Management Plan], 4.3.7 [Hazardous Materials Transportation Plan], and 4.3.8 [Traffic Control Plan]). 6. **Progress Documentation.** The project applicant shall submit a progress report to the RWQCB and the District for their review on a recurring basis during the remediation activities that shall be no less than quarterly and may be as frequent as	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			monthly, which shall be determined at the discretion of the RWQCB and District based on circumstances present at the time of the activities. 7. **Final Documentation.** Final documentation evidencing the completed remediation work shall also be submitted to the RWQCB and the District. Once the concentrations of COCs do not exceed the preconstruction levels documented in the Sediment Characterization Report, no further remediation is required by this mitigation measure. However, as a requirement of the CWA Section 401 certification and as the agency with primary jurisdiction over water quality in the San Diego Bay, the RWQCB may require additional steps, as appropriate, in the course of prescribing, overseeing, and enforcing conditions of the CWA Section 401 Water Quality certification as the agency deems necessary to comply with the Clean Water Act and the Porter-Cologne Water Quality Control Act.	
Create a Hazard From Being Located on a Site That is Listed as a Hazardous Materials Site Pursuant to Government Code Section 65962.5	**Impact-HAZ-2**, as discussed above.	PS	Implement **MM-HAZ-10**, as described above. Implement **MM-WQ-1** and **MM-WQ-2**, as described under Section 3.6, *Hydrology and Water Quality*.	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Cumulative Impacts				
The proposed project's contribution to cumulative impacts related to hazards and hazardous materials would not be cumulatively considerable because the project would be required to implement mitigation measures **MM-BIO-1** through **MM-BIO-7**, **MM-WQ-1** and **MM-WQ-2**, and **MM-HAZ-1** through **MM-HAZ-10**; no additional mitigation specific to cumulative impacts would be required.				
3.6 Hydrology and Water Quality				
Project Impact				
Violate Water Quality Standards or Waste Discharge Requirements or Degrade Surface or Ground Water Quality	**Impact-WQ-1: Degradation of Water Quality from Sediment Disturbance During In-Water Construction.** The project proposes components that would involve in-water construction and disturbance to the bay floor. Disturbance of the bay floor would cause sediment to temporarily be resuspended, thereby increasing turbidity and potentially lowering levels of dissolved oxygen, increasing salinity, increasing concentrations of suspended solids, and potentially releasing chemicals present in the sediment into the water column within as well as outside the project's boundaries. Impacts would be significant.	PS	Implement mitigation measure **MM-BIO-4** as described under Section 3.2, *Biological Resources*. **MM-WQ-1: Provide Evidence of Section 401 Water Quality Certification and Monitor Turbidity and Constituents of Concern During Construction-Related Sediment Disturbance.** Prior to commencing construction activities in water that have the potential to disturb sediments, the proposed project must provide evidence to the District that the Section 401 CWA certification has been obtained from the Regional Water Quality Control Board (RWQCB) for sediment-disturbing activities. Unless the RWQCB requires additional or alternative measures which provide an equivalent or greater degree of environmental protection as conditions for the issuance of the CWA Section 401 Water Quality Certification, the project proponent shall implement the following steps to ensure the proposed project does not violate the water quality objectives of the Basin Plan or hinder implementation of or otherwise conflict with the RWQCB's Framework for Monitoring and Assessment in the San Diego Region and Strategic Water Quality Assessment Approach for San Diego Bay. • Retain a water quality specialist with at least 5 years of water quality monitoring experience to	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			prepare a water quality monitoring plan and conduct water quality monitoring to demonstrate to the District and the RWQCB that in-water construction activities do not violate the Basin Plan or applicable water quality objectives. • Obtain approval of the water quality monitoring plan from the District and RWQCB (related to the CWA Section 401 water quality certification) before in-water construction activities may be initiated. • The water quality monitoring plan shall incorporate: ○ (1) all permit-specific regulatory monitoring and reporting requirements (e.g., CWA Section 401 conditions), and ○ (2) a detailed description of the proposed water quality monitoring plan, which shall clearly identify the project boundaries, chemical constituents of concern, and water quality objectives identified in consultation with the RWCQB, the agency with the primary jurisdiction over water quality in the San Diego Bay. The water quality monitoring plan shall also 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 shall be designed to indicate if 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	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			calibrated water quality monitoring field equipment to measure, at a minimum: turbidity, dissolved oxygen, pH, temperature, and salinity. If water column monitoring indicates exceedances of water quality objectives identified in consultation with the RWQCB (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 except in those instances where measurements such as water temperature and pH can be determined immediately in the field and not jeopardize the samples by exceeding transportation time to the lab for analysis. The designated water quality monitor shall ensure that turbidity does not extend outside of the immediate construction area. Depending upon the requirements in the permit, the water quality monitor may stop construction work and shall alert the regulatory agencies (e.g., RWQCB) 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.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			MM-WQ-2: Implement Water Quality Best Management Practices During Construction. During construction activities, BMPs, which must be listed in the contractor specifications and plans and with evidence provided to the District, shall be implemented by the project proponent and shall include the following: • The contractor shall fully understand and adhere to the terms and conditions of approvals and permits obtained as well as all project BMPs. • All construction activities shall occur within the designated project footprint. • Disturbance to the ocean bottom and intertidal areas shall be minimized. • 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. • Appropriate types and sufficient quantities of materials shall be maintained onsite to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the United States and/or State. • The project applicant (NASSCO) shall properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or stormwater runoff. The storage, handling, treatment, or disposal of waste	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			shall not create conditions of pollution, contamination, or nuisance as defined in the California Water Code Section 13050. • Netting, sandbags, tarps, or other forms of barriers shall be placed around staging areas to prevent debris from entering the water. • All equipment must be washed prior to transport to the project site and must be free of sediment, debris, and foreign matter. All equipment used in direct contact with surface water shall be steam-cleaned prior to use. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors, pumps, generators, etc.) shall be positioned over drip plans or other types of containment. • Floating booms shall be maintained around the project area to capture floating debris. Divers shall recover non-buoyant debris from the bay bottom within 72 hours of known condition. All debris and trash shall be collected and disposed of in appropriate waste containers by the end of each construction day. Discharge of hazardous materials into the project site shall be prohibited. • Following project completion, all project-generated debris, building materials, excess material, waste, and trash shall be removed from the project site for disposal at an authorized landfill or other disposal site in compliance with federal, state, and local laws and regulations.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			• All debris and trash shall be collected and disposed of in appropriate waste containers by the end of each construction day. • Discharge of hazardous materials into the project site shall be prohibited. • Load-controlled boat movement, line attachment, and/or horsepower requirements of tugs and support boats at the project site must be specified to avoid resuspension of sediment. Such measures may include speed restrictions, establishment of off-limit areas, and use of shallow draft vessels. • NASSCO shall deploy and maintain a continuous length of single silt curtain(s) fully surrounding in-water project activities to control and contain the migration of resuspended sediments at the water surface and at depth. Silt curtain deployment shall be in conformance with the following requirements: o The silt curtains must be comprised of Type III geotextile material. o The silt curtains must restrict the surface visible turbidity plume or surface debris to the area of construction and sediment disturbance and must control and contain the migration of resuspended sediments or debris at the water surface and at depth. o The silt curtain must be maintained as a full turbidity enclosure. The silt curtains must be supported by floating debris booms in open	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			water areas such as along the bayward side of the area of disturbance. Along the pier edges, the silt curtains may be connected to the pier structure. o The bottom of the silt curtains must be weighted with ballast weights or rods affixed to the base of the fabric to resist the natural buoyancy of the silt curtain fabric and lessen its tendency to move in response to currents. Where feasible and applicable, the floating silt curtains must be anchored and deployed from the surface of the water to just above the substrate. o If necessary, silt curtains with tidal flaps must be installed to facilitate curtain deployment in areas of higher flow. Based on a determination of the District, and subject to concurrence from the RWQCB pursuant to the Federal Clean Water Act (CWA) and Porter-Cologne Water Quality Control Act, air curtains may be used in conjunction with silt curtains to contain resuspended sediment, enhance worker safety, and allow barges to transit into and out of the work area without the need to open and close silt curtain gates. o Silt curtains must be continuously monitored for damage, dislocation, or gaps and must be immediately repaired where it is no longer continuous or where it has loosened.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			○ Silt curtains must not be removed until the visible turbidity plume has dissipated and/or surface debris is skimmed and removed. ○ Sediment disturbance within the remedial boundaries identified in Figure 3.5-1, 3.5-2, and 3.5-3 shall require double silt curtains in place of single silt curtains. • 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 issued by the United States Army Corps of Engineers and CWA Section 401 Water Quality Certification issued by the Regional Water Quality Control Board. Impact hammer pile driving, internal jetting, or spudding may be required based on the type of pile installation, or removal, that occurs. The following additional measures shall be required based on the type of pile installation, or removal, that occurs. ○ Impact Hammer Pile Driving Turbidity curtains shall be installed by the proponent in compliance 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 Spudding shall not be allowed unless the project applicant can demonstrate, to the District's	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			satisfaction, there are no feasible alternatives to the use of spudding. If no alternatives to spudding are feasible, when spuds are lifted during in-water construction, they 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. ○ Internal Jetting Internal jetting shall not be allowed unless the project applicant can demonstrate, to the District's satisfaction. If no alternatives to internal jetting are feasible, the use of internal jetting shall be subject to the installation of double silt curtains regardless of location within the project site (MM-WQ-2), post-construction monitoring (MM-WQ-1) and limitations on water flow rate, jet nozzle velocity and duration as determined by the RWQCB during the Section 401 permitting process. This measure shall also be implemented along with **MM-HAZ-1 through MM-HAZ-10**. Furthermore, this measure shall apply unless the RWQCB, the government agency charged with enforcement of the Federal Clean Water Act and State Porter-Cologne Water Quality Control Act, finds that additional or alternative measures which provide an equivalent or greater degree of environmental protection are appropriate and required in order to issue the CWA Section 401 Water Quality Certification.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Violate Water Quality Standards or Waste Discharge Requirements or Degrade Surface or Ground Water Quality (Cont.)	**Impact-WQ-2: Degradation of Water Quality from Accidental Release of Hazardous Materials into San Diego Bay.** Project construction would involve the use and disposal of hazardous waste, including fuels, lubricants, and solvents. These hazardous materials could be accidentally released into the San Diego Bay during construction activities, which could result in a potentially significant impact on water quality.	PS	Implement mitigation measures **MM-HAZ-1** through **MM-HAZ-9** as described under Section 3.5, *Hazards and Hazardous Materials*. Implement mitigation measure **MM-WQ-2**, as described under Section 3.6, *Hydrology and Water Quality*.	LTS
Violate Water Quality Standards or Waste Discharge Requirements or Degrade Surface or Ground Water Quality (Cont.)	**Impact-WQ-3: Waterside Potential to Encounter Hazardous Materials in Sediment in Previously Inaccessible Areas.** The San Diego RWQCB issued CAO R9-2012-0024 for sediment contamination within the NASSCO and BAE Systems leaseholds. Contaminated marine bay sediments were removed from some locations within the Shipyard Sediment site under Order R9-2013-0093 using environmental dredging techniques. However, sand or gravelly sand covers were placed in four areas within the NASSCO leasehold where dredging activities would have threatened the stability of the slopes or in-water structures. As such, the contamination present in those sediments was not removed, but was covered to prevent mixing of contaminants with the water column	PS	Implement mitigation measure **MM-HAZ-10** as described under Section 3.5, *Hazards and Hazardous Materials*.	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	or clean sediment. A fifth area under the Repair Wharf Complex was inaccessible to dredging and sand cover and it is probable that contaminants are present at elevated concentrations in surficial sediments at this location. The project would allow access into these previously inaccessible areas. The proposed pile removal and replacement has potential to disturb contaminated sea-floor sediments associated with prior activities that have occurred under CAO R9-2012-0024, which may result in a potentially significant water quality impact.			
Alter the Existing Drainage Pattern in a Manner that would (1) Create or Contribute Runoff Water in Excess of Stormwater Drainage System Capacity or Provide Additional Sources of Polluted Runoff or (2) Impede	Implementation of the proposed project would not substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would 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.	LTS	No mitigation is required.	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
or Redirect Flood Flows				
Conflict with a Water Quality Control Plan or Sustainable Groundwater Management Plan	**Impact-WQ-1**, **Impact-WQ-2**, and **Impact-WQ-3** as discussed above.	PS	Implement mitigation measure **MM-BIO-4** as described under Section 3.2, Biological Resources. Implement mitigation measures **MM-HAZ-1** through **MM-HAZ-10** as described under Section 3.5, *Hazards and Hazardous Materials*. Implement mitigation measures **MM-WQ-1** and **MM-WQ-2** as described above.	LTS
Cumulative Impacts				
The proposed project's contribution to cumulative impacts related to hydrology and water quality would not be cumulatively considerable because the project would be required to implement mitigation measures **MM-WQ-1** and **MM-WQ-2**, **MM-BIO-4**, and **MM-HAZ-1** through **MM-HAZ-10**; no additional mitigation specific to cumulative impacts would be required.				
3.7 Land Use and Planning				
Project Impacts				
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-LU-1: Conflict with the California Coastal Act and San Diego Bay Integrated Natural Resources Management Plan.** Prior to the incorporation of mitigation measures **MM-BIO-1** through **MM-BIO-7**, **MM-HAZ-1** through **MM-HAZ-10**, and **MM-WQ-1** and **MM-WQ-2**, a potential conflict with the California Coastal Act and Integrated Natural Resources Management Plan could occur, resulting in potential impacts on marine wildlife, sensitive habitat, and water quality.	PS	Implement mitigation measures **MM-BIO-1 through MM-BIO-7** as described under Section 3.2, *Biological Resources*. Implement mitigation measures **MM-HAZ-1 through MM-HAZ-10** as described in Section 3.5, *Hazards and Hazardous Materials*. Implement mitigation measures **MM-WQ-1** and **MM-WQ-2** as described in Section 3.6, *Hydrology and Water Quality*.	LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Cumulative Impacts				
The proposed project's contribution to cumulative impacts related to land use and planning would not be cumulatively considerable because the project would be required to implement mitigation measures **MM-BIO-1 through MM-BIO-7**, **MM-HAZ-1 through MM-HAZ10**, and **MM-WQ-1** and **MM-WQ-2**; no additional mitigation specific to cumulative impacts would be required.				
3.8 Noise and Vibration				
Project Impacts				
Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in Excess of Applicable Standards	Implementation of the proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of local noise standards.	LTS	No mitigation is required.	LTS
Generation of Excessive Groundborne Vibration or Groundborne Noise Levels	Implementation of the proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.	LTS	No mitigation is required.	LTS
Expose People to Excessive Airstrip or Airport Noise Levels	Implementation of the proposed project would not expose people residing or working in the project area to excessive noise levels from a private airstrip, public airport, or public use airport.	LTS	No mitigation is required.	LTS
Cumulative Impacts				
The proposed project's incremental contribution to cumulative impacts related to noise and vibration would be less than cumulatively considerable; no additional mitigation specific to cumulative impacts would be required.				

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
3.9 Transportation, Circulation, and Parking				
Project Impacts				
Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System	The proposed project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	LTS	No mitigation is required.	LTS
Conflict or be Inconsistent with State CEQA Guidelines Section 15064.3, Subdivision (b).	The proposed project would not conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b).	LTS	No mitigation is required.	LTS
Substantially Increase Hazards due to Geometric Design Feature or Incompatible Uses	The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	LTS	No mitigation is required.	LTS
Result in Inadequate Emergency Access	The proposed project would not result in inadequate emergency access.	LTS	No mitigation is required.	LTS
Cumulative Impacts				
The proposed project's incremental contribution to cumulative impacts related to transportation, circulation, and parking would be less than cumulatively considerable; no additional mitigation specific to cumulative impacts would be required.				

Notes: NI = No Impact; LTS = Less Than Significant; PS = Potentially Significant; SU = Significant and Unavoidable

Chapter 1
Introduction

1.1 Project Overview

General Dynamics-NASSCO (NASSCO) is proposing the Floating Dry Dock Replacement and Waterfront Improvement Project (project) located at the NASSCO shipyard on and adjacent to San Diego Bay at 2798 East Harbor Drive in San Diego, California. The NASSCO shipyard leasehold encompasses 5,507,621 square feet (126 acres) of tideland area that is leased from the San Diego Unified Port District (District). Project improvements would occur within the existing NASSCO leasehold on approximately 94,869 square feet (2.2 acres) (project site), including 26,158 square feet of overwater coverage (permanent and temporary) and 68,711 square feet of fill area.

NASSCO, as the project proponent, is proposing a repair and replacement project for waterfront infrastructure associated with shipbuilding and repair operations at the NASSCO shipyard. The project is designed to address existing deficiencies related to the age and condition of structures, shoreline sloughing, and outdated operational conditions at the existing dry dock. Specifically, the project includes the following elements:

- Removal and replacement of the existing floating dry dock and construction of supporting infrastructure;
- Improvements to the Repair Complex Wharf;
- Repairs to the quay wall and revetment along stretches of shoreline throughout the NASSCO leasehold, which includes shoreline segments from Lot 20 to Pier 12, floating dry dock approach pier to Berth 8, Ways to Building Dock, Berth 2 to Berth 3, Berth 4 to Berth 5, and Berth 6 to Navy Base Quay Wall; and
- As-needed structural repair and/or replacement of selected piles at Berths 2, 3, 4, 5, 6, at Pier 12 and the floating dry dock approach pier, and at the Berth 1 Platform.

The majority of the proposed work would take place within the District's jurisdiction; however, the project would involve some activities outside the U.S. Pierhead Line (i.e., installation of west offshore mooring dolphin and temporary repositioning of floating dry dock in "Lot 20" position during vessel launches from the inclined building ways or building dock). NASSCO would apply directly to the California Coastal Commission (CCC) for authorization and entitlements for those project components.

In addition to the project overview provided above, this chapter briefly discusses (1) the purpose of the California Environmental Quality Act (CEQA) and this Draft Environmental Impact Report (Draft EIR), (2) the intended uses of this Draft EIR, (3) the scope and content of this Draft EIR, and (4) the organization of this Draft EIR.

This Draft EIR and its appendices are available for review on the District's website at https://www.portofsandiego.org/public-records/port-updates/notices-disclosures/ceqa-documents. In addition, a hardcopy is available for review by the public during District business hours at the Port Administration Building located at 3165 Pacific Hwy, San Diego, CA 92101.

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

This Draft EIR, which evaluates the environmental effects of the project, has been prepared in compliance with CEQA (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). This Draft EIR has also been prepared in compliance with the District's *Guidelines for Compliance with the California Environmental Quality Act* (Resolution 97-191).

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 EIR 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, 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 objectives. In instances where significant impacts cannot be avoided or mitigated, the 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.

1.3 Documents Incorporated by Reference

The proposed project includes in-water construction activities that are subject to the jurisdiction and permitting requirements of regulatory agencies, including the San Diego Regional Water Quality Control Board (RWQCB) and the U.S. Army Corps of Engineers (USACE) (See Table 2-6 for a list of Discretionary Actions). As discussed in Section 3.5, *Hazards and Hazardous Materials*, and Section 3.6, *Hydrology and Water Quality*, the District's approval of the proposed project would be conditioned upon the project obtaining all required permits and approvals and complying with all conditions of approval and mitigation measures required by the resource agencies.

In-water construction activities will occur within the boundaries of the South Site of the Shipyard Sediment Remediation Project (see Figure 3.5-1), which is subject to the regulatory jurisdiction of the RWQCB and the requirements of Clean-up and Abatement Order (CAO) R9-2012-0024. The RWQCB issued the CAO to require the remediation of sediment contamination in certain areas within the project site. The RWQCB also identified mitigation measures to address the potential significant impacts of the CAO's remediation activities in the Final Environmental Impact Report for

the Shipyard Sediment Remediation Project (2011) (State Clearinghouse No. 2009111098) and the associated Mitigation Monitoring and Reporting Program (Shipyard MMRP).

Pursuant to CEQA Guidelines Section 15150, the following documents issued, certified and adopted by the RWQCB are incorporated by reference in this EIR: CAO R9-2012-0024; the 2011 Shipyard Final EIR; the Shipyard MMRP; and the Addendum to the Final Program Environmental Impact Report San Diego Shipyard Sediment Remediation Project Related to Changes Identified in the RWQCB Order No. R9-2013-0093, dated July 10, 2013. Copies of these documents are available to the public for inspection in the office of the District Clerk, San Diego Unified Port District, 3165 Pacific Highway, San Diego, CA 92101.

1.4 Intended Uses of the Environmental Impact Report

This section discusses the intended uses for this Draft EIR and includes (1) a list of agencies that would be expected to use this Draft EIR for decision-making and (2) a list of required permits and other approvals that would be required to implement the project. 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 in Chapter 3, *Environmental Analysis*.

1.4.1 Agencies Expected to Use this Environmental Impact Report

The District is the CEQA lead agency, as defined under State CEQA Guidelines Sections 15050 and 15051, because it has principal responsibility for approving the project. 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 project; the results of that analysis are presented in this Draft EIR. The Board of Port Commissioners (Board), in its role as the decision-making body of the District, is responsible for certifying the Final EIR and approving the Findings of Fact and Statement of Overriding Considerations, if required, pursuant to Sections 15090–15093 of the State CEQA Guidelines, prior to project approval. The Board is also responsible for authorization of issuance of a Coastal Development Permit (CDP) and a Real Estate Agreement for project elements outside the U.S. Pierhead Line (i.e., installation of west offshore mooring dolphin and temporary repositioning of floating dry dock in "Lot 20" position during vessel launches from the inclined building ways or building dock). The California Coastal Commission (CCC), as a CEQA responsible agency, would use the EIR in its decision to authorize a CDP and Right of Entry for the portions of the project within its permitting jurisdiction.

The U.S. Army Corps of Engineers, as the federal agency with permitting oversight, would rely on information in the EIR in its decision to authorize an individual/nationwide Section 404 permit (for discharge of fill material into waters of the United States) and a Section 10, Rivers and Harbors Act Permit (for regulating activity within or over navigable waters of the United States); the Regional Water Quality Control Board, as a CEQA responsible agency, would use the EIR in its decision to authorize Section 401 Certification for those activities.

The San Diego County Air Pollution Control District would consider the project as it relates to the issuance of permits for diesel generators.

Table 1-1 provides a summary list of the approvals and permits that would be required.

Table 1-1. List of Required Discretionary Actions

Agency	Permit or Approval
U.S. Army Corps of Engineers	• Authorize individual/nationwide Clean Water Act Section 404 Permit (33 U.S. Code Section 1341) • Rivers and Harbors Act Section 10 Permit
California Coastal Commission	• Approval of Coastal Development Permit for project elements outside the U.S. Pierhead Line (i.e., installation of west offshore mooring dolphin and temporary repositioning of floating dry dock in "Lot 20" position during vessel launches from the inclined building ways or building dock) • Right of Entry for construction activities on piers adjacent to U.S. Pierhead Line
San Diego Regional Water Quality Control Board	• Clean Water Act Section 401 Water Quality Certification
San Diego County Air Pollution Control District	• Permits for Diesel Generators
San Diego Unified Port District	• Certification of the Final EIR in compliance with CEQA • Adoption of Mitigation Monitoring and Reporting Program • Adoption of the Findings of Fact • Conditional Project Approval • Authorization of Coastal Development Permit • Real Estate Agreement for west offshore mooring dolphin and dry dock temporary mooring location (Lot 20 position) that would be located outside the U.S. Pierhead Line

1.5 Scope and Content of the Draft Environmental Impact Report

As the CEQA lead agency, the District is responsible for determining the scope and content of this Draft EIR, a process referred to as *scoping*. As part of the scoping process, the District considered the environmental resources present on the project site and in the surrounding area and identified the probable environmental effects of the project. On January 25, 2023, the District posted a Notice of Preparation (NOP) with the County Clerk, in accordance with Section 15082 of the State CEQA Guidelines. The 30-day public review period for the NOP began on January 25, 2023, and ended on February 24, 2023. The NOP and notices of NOP availability were mailed to public agencies, organizations, and interested individuals to solicit their comments on the scope and content of the environmental analysis. The District also held a virtual public scoping meeting on February 16, 2023.

Comments received in response to the NOP were used to determine the scope of this Draft EIR. The comments are summarized in Table 1-2, below. Based on the District's preliminary evaluation of the probable effects of the project and thorough review of the comments on the NOP, the Draft EIR analyzes effects associated with the following resources:

- Air Quality and Health Risk

- Biological Resources
- Climate Change, Greenhouse Gas Emissions, and Energy
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Transportation, Circulation, and Parking

The District determined during preparation of the Initial Study Environmental Checklist (see Appendix C) that the project would have either a less-than-significant impact or no impact associated with the following resources: aesthetics; agriculture and forestry resources; cultural resources; mineral resources; population and housing; public services; recreation; tribal cultural resources; utilities and service systems; and wildfire. In addition, the District determined through the Initial Study Environmental Checklist that the project would have a less-than-significant impact or no impact on certain issue areas within air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, and transportation. Section 5.3, *Effects Not Found to Be Significant*, of this Draft EIR includes a brief analysis of why impacts on these resources would not be significant, as discussed in the Initial Study Environmental Checklist (Appendix C).

1.5.1 Comments Received in Response to the Notice of Preparation

Several specific environmental issues were raised in the comments on the NOP. A summary of the comments is provided in Table 1-2, along with the title of the section where the comments are addressed in the Draft EIR. Only comments that pertain to the environmental scope of the Draft EIR are summarized. A copy of the NOP and all NOP comment letters are provided in Appendix A and Appendix B (respectively) of this Draft EIR.

Table 1-2. Summary of NOP Comments Received

Commenter	Subject of Comment
Federal Agency	
United States Department of the Navy	Comply with NPDES permitting.
	Demonstrate how additional air emissions will be handled.
State Agency	
Native American Heritage Commission	Determine whether there are historical resources within the area of project effect (APE) and if the project will cause a substantial adverse change in the significance of a historical resource. Comply with Assembly Bill 52 and Senate Bill 18, as appropriate. Adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or, barring both, mitigation of project-related impacts on tribal cultural resources.
Organizations	
Coast Law Group LLP, on behalf of Environmental Health Coalition and San Diego Coastkeeper	Characterize sediment contamination in conjunction with the CEQA review process to avoid deferral of mitigation for impacts from marine sediment disturbance.
	Identify performance standards for remediation, if necessary. Disclose air quality, greenhouse gas, traffic, and hazardous materials impacts from remediation activities.
	Ensure consistency between air quality mitigation measures and modeling assumptions in the technical appendices.
	Provide methodology, assumptions, and calculations used for Health Risk Assessment.
	Implement measures (use of zero-emission vehicles) to ensure consistency with the Port's Maritime Clean Air Strategy, Community Emissions Reduction Program, and other climate goals.
	Revise equipment assumptions in air quality modeling with more up-to-date data.
	Revise cumulative analysis to comply with San Diego Air Pollution Control District rules.
	Establish enforcement mechanisms to ensure that the project is consistent with truck route and traffic-related policies and goals.
Mitchell M. Tsai, on behalf of the Southwest Mountain States Regional Council of Carpenters	Utilize a local work force to reduce the length of vendor trips, improve air quality, reduce greenhouse gas emissions, and provide localized economic benefits.
	Comply with requirements for safe on-site construction work practices.

1.6 Organization of the Draft EIR

The content and format of this Draft EIR are designed to meet the requirements of CEQA and State CEQA Guidelines Article 9. Table 1-3 summarizes the organization and content of the Draft EIR.

Table 1-3. Document Organization and CEQA Requirements

Draft EIR Chapter	Contents
Summary	Includes a brief summary of the project; 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 *Introduction*	Discusses the purpose of CEQA and this Draft EIR, the scope and content of this Draft EIR, the organization of this Draft EIR, and the intended uses for this Draft EIR (State CEQA Guidelines Section 15124(d)).
Chapter 2 *Environmental Setting and Project Description*	Describes the overall existing physical conditions in the vicinity of the project when the analysis was initiated. The specific existing setting/conditions for each resource area are described in the applicable resource sections in Chapter 3, *Environmental Analysis* (State CEQA Guidelines Section 15125). Contains both a map of the precise location and boundaries of the project and its location relative to the region, lists the project's central objectives, underlying purpose, as well as project benefits, and provides a detailed description of the project's characteristics (State CEQA Guidelines Section 15124(a), (b), and (c)).
Chapter 3 *Environmental Analysis*	Describes the existing physical conditions for each resource area, lists the applicable 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 and indirect significant impacts on the environment that would result from implementation of the project, and lists feasible mitigation measures that would eliminate or reduce the identified significant impacts (State CEQA Guidelines Sections 15125–15126.4).
Chapter 4 *Cumulative Impacts*	Defines the cumulative study area for each resource; identifies past, present, and reasonably foreseeable future projects with related impacts within each study area; and evaluates the contribution of the project to a cumulatively significant impact. This chapter also lists feasible mitigation measures that would eliminate or reduce the identified significant cumulative impacts (State CEQA Guidelines Section 15130).
Chapter 5 *Additional Consequences of Project Implementation*	Discusses the ways the project could foster economic or population growth, either directly or indirectly, in the surrounding environment; describes the significant irreversible changes associated with the project's implementation; and provides a brief discussion of the environmental resource impacts that were found to be not significant during preparation of this Draft EIR (State CEQA Guidelines Sections 15126.2(c) and (d), 15127, and 15128).
Chapter 6 *Alternatives to the Proposed Project*	Describes a reasonable range of alternatives to the project, including the No Project Alternative; compares and contrasts the significant environmental impacts of alternatives to the project; and identifies the environmentally superior alternative (State CEQA Guidelines Section 15126.6).
Chapter 7 *List of Preparers and Agencies Consulted*	Lists the individuals and agencies involved in preparing this Draft EIR (State CEQA Guidelines Section 15129).

Draft EIR Chapter	Contents
Chapter 8 *References*	Provides a comprehensive listing by chapter of all references cited in this Draft EIR (State CEQA Guidelines Section 15148).
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 relevant to the impact analysis.

Chapter 2
Environmental Setting and Project Description

2.1 Environmental Setting

2.1.1 Introduction

This chapter provides a description of the overall physical environmental conditions in the vicinity of the proposed project, from both a local and regional perspective, as they existed at the time the Notice of Preparation was published on January 25, 2023[1]. Resource-specific existing conditions are provided within each individual resource section of Chapter 3, *Environmental Analysis*. The applicable resource sections of Chapter 3 also describe the project's consistency with applicable plans.[2]

2.1.2 Existing Setting

2.1.2.1 San Diego Unified Port District

The San Diego Unified Port District (District) was created with the Port Act, 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 (collectively, Tidelands) 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, and for all commercial and industrial uses and purposes.

The mission of the District is to protect, promote, and facilitate tidelands 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 (Bay) that promote commerce, navigation, fisheries, recreation, and ecological preservation on the Tidelands granted to the District by the Port Act. 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.

[1] State CEQA Guidelines Section 15125 states that 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 an understanding of the significant effects of the proposed project and its alternatives" (emphasis added).

[2] For example, Section 3.1, *Air Quality and Health Risk*, contains a project consistency analysis with the applicable air quality plans.

2.1.2.2 Project Location

The project site is within the General Dynamics-NASSCO (NASSCO) leasehold, located at 2798 East Harbor Drive in San Diego, California. Although the NASSCO leasehold encompasses 126 acres of tideland area, project improvements would occur on approximately 2.2 acres of water-side facilities within the leasehold and overall construction- and operation-related activities would occur within an approximately 75-acre area, which is identified in Figure 2-2.

The NASSCO leasehold is bordered to the north by Harbor Drive, a major north-south transportation corridor that connects the San Diego International Airport, waterfront, Convention Center, Gaslamp District, Ballpark District, and Barrio Logan. Railroad right-of-way (ROW) is located immediately north of Harbor Drive. Harborside Station on the San Diego Metropolitan Transit System Blue Line is approximately 200 feet northeast of the NASSCO leasehold and 800 feet northeast of the project site. Highways in proximity to the project site include Interstate 5, Interstate 15, and State Route 75. The regional location is shown on Figure 2-1. Figure 2-2 shows the precise location and boundaries of the project site.

2.1.2.3 Existing Land and Water Use Designations

The project site occupies land and water that is under the jurisdiction of the District and within the City of San Diego. The District's Port Master Plan (PMP) governs the land and water uses on Tidelands that the State Legislature has granted to the District, as trustee, and for which the District has regulatory duties and proprietary responsibilities. The PMP establishes 10 planning districts covering approximately 5,500 acres of District jurisdiction. The project site is within Planning District 4 (Tenth Avenue Marine Terminal) of the District's certified PMP. The planning district encompasses approximately 371 acres and consists of the following water and land uses: industrial and deep-water berthing, institutional/roadway, marine terminal, maritime services and industrial, and recreation open space. Planning District 4 is the only area in the entire San Diego region with an established waterfront industrial shipping operation. The project site is in the Harbor Drive Industrial Subdistrict of Planning District 4, which is dedicated for shipbuilding and ship repair for the defense and maritime industries. PMP land and water use designations within the project site include Marine Related Industrial and Specialized Berthing.

2.1.3 Surrounding Conditions

The project site is within and adjacent to the San Diego Bay in a highly industrialized area of the waterfront. Heavy industry land uses to the northwest of the project site include a ship repair facility operated by BAE Systems, and beyond that ship engineering services, shipbuilding and repair facilities, and a hydrocolloid manufacturing plant. Military land uses to the east and southeast of the project site include Naval Base San Diego. Land uses north of the project site across Harbor Drive and the railroad ROW include military, light industry, and commercial and office land uses.

Open water of the San Diego Bay is south and west of the project site, with the City of Coronado farther west (approximately 1.4 miles across the Bay from the project site). The nearest residence is approximately 1,250 feet northeast of the project site and is separated from the project site by Harbor Drive, railroad ROW, and a recycling center.

Source: adapted by Ascent Environmental in 2021

Figure 2-1 Regional Location

Source: adapted by Ascent Environmental in 2021

Figure 2-2 Project Location

2.1.4 Existing Site Conditions

The project site includes the following major components as shown in Figure 2-3: a floating dry dock, the Repair Complex Wharf, quay walls and support piles. The floating dry dock is a structure where vessels are floated in and then the water is drained to allow for construction, maintenance, and repair to occur in dry conditions. It is connected to the land by a pile-supported approach pier with integrated mooring dolphin. A mooring dolphin is a cluster of piles that are used to secure vessels using ropes. The Repair Complex Wharf is a timber wharf that has been previously used as a laydown area for vessel repair and staging. It is temporarily not in use due to safety concerns. The project site's existing quay wall includes a rock revetment in front of the wall that has failed in certain locations. Structural piles support the various in water and wharf-side structures. Existing site conditions for each project component are described in detail under their respective subheadings in Section 2.2.3, *Project Components*.

2.2 Project Description

This section describes the project, its need and purpose, its objectives, and approvals necessary for its implementation.

2.2.1 Project Need and Purpose

The current floating dry dock, built in 1983, has reached the end of its useful life. The project includes replacement of the existing floating dry dock with a new floating dry dock of similar characteristics and the same functionality in the same location as the current floating dock. Improvements to supporting infrastructure (i.e., replacing mooring dolphins and utilities; reconfiguring the existing approach pier) would be required to comply with current standards and codes. Specifically, the existing floating dry dock and mooring dolphins do not meet U.S. Navy's MIL-STD-1625D, Department of Defense Standard Practice: Safety Certification Program for Drydocking Facilities and Shipbuilding Ways for U.S. Navy Ships, which is the current standard for all floating dry docks and associated infrastructure. The proposed mooring dolphins are designed to meet the required seismic and wind loading requirements outlined in this standard. The proposed approach pier modification and subsequent mechanical and utility modifications are required to allow for the relocation of the floating dry dock during the launch of new construction vessels within the NASSCO leasehold.

The Repair Complex Wharf is landward of the floating dry dock. Currently, the wharf provides limited laydown and space for offices. However, it is in disrepair and would need to be replaced to fully use this area of the facility. As part of the project, NASSCO is proposing to initially demolish the existing wharf, and then subsequently replace the existing wharf with a new structure that would permit storage and laydown capabilities in this area of the facility.

The project would also include repair of the failed revetment and exposed shoreline present throughout the NASSCO leasehold, including shoreline segments from Lot 20 to Pier 12, floating dry dock approach pier to Berth 8, Ways to Building Dock, Berth 2 to Berth 3, Berth 4 to Berth 5, and Berth 6 to Navy Base Quay Wall. Proposed repairs include placement of stabilizing material (mostly rock riprap) to address existing damage and prevent future damage from wave action and to maintain existing safe operation of the NASSCO shipyard.

Finally, the project includes programmatic repair and/or replacement of damaged piles that support Berths 2, 3, 4, 5, 6, and Pier 12 and the floating dry dock approach pier and the Berth 1 Platform. The proposed repairs are necessary to restore the structural integrity of these piers, extend their service lives, and provide safe mooring berths for new construction and repair vessels.

In sum, the project is needed to address deficiencies related to the age and condition of structures, shoreline sloughing, and operational conditions at the existing dry dock. Absent these activities, the NASSCO shipyard would not be able to safely function in supporting various shipbuilding and repair operations.

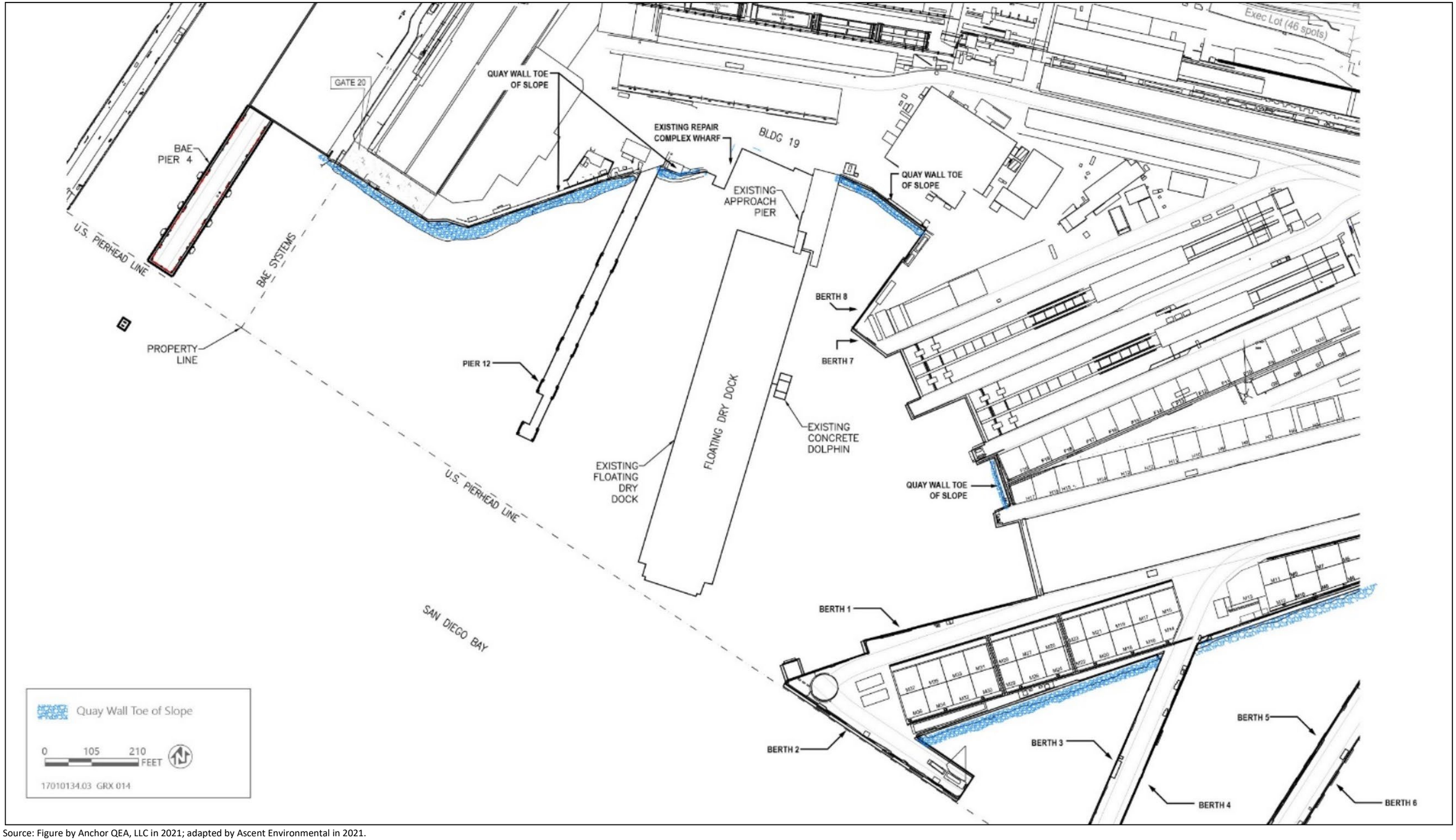
2.2.2 Project Objectives

To achieve the need and purpose of the proposed project, the following project objectives have been identified:

1. Meet the needs of the current and anticipated fleets of the military and commercial customers by modernizing the NASSCO shipyard facility through the improvement and/or replacement of existing infrastructure and equipment.
2. Continue the use of existing waterways, available shoreline, and existing shipyard facilities within the Port in an environmentally responsible manner.
3. Enhance environmental protection and meet current safety standards by modernizing equipment and facilities.
4. Preserve jobs by maintaining the physical capacity and technical capability to support the Navy's presence as well as commercial maritime needs in San Diego.
5. Install infrastructure that allows repositioning the floating dock from its home location to a location within the leasehold more efficiently, thereby reducing the amount of time and operations required to release newly constructed or repaired vessels into the water from NASSCO's Ways infrastructure.
6. Demolish and rebuild the Repair Complex Wharf, which has historically been used as a laydown area for vessel repair and staging, but has been temporarily taken out of use due to safety concerns.
7. Repair the existing deteriorating revetment and quay wall to restore the revetment to full functionality, protect against erosion, protect structures on land, and prevent further deterioration.
8. Repair or replace deteriorating piles to ensure the continued stability and safety of existing structures, such as the Approach Pier to the Drydock.

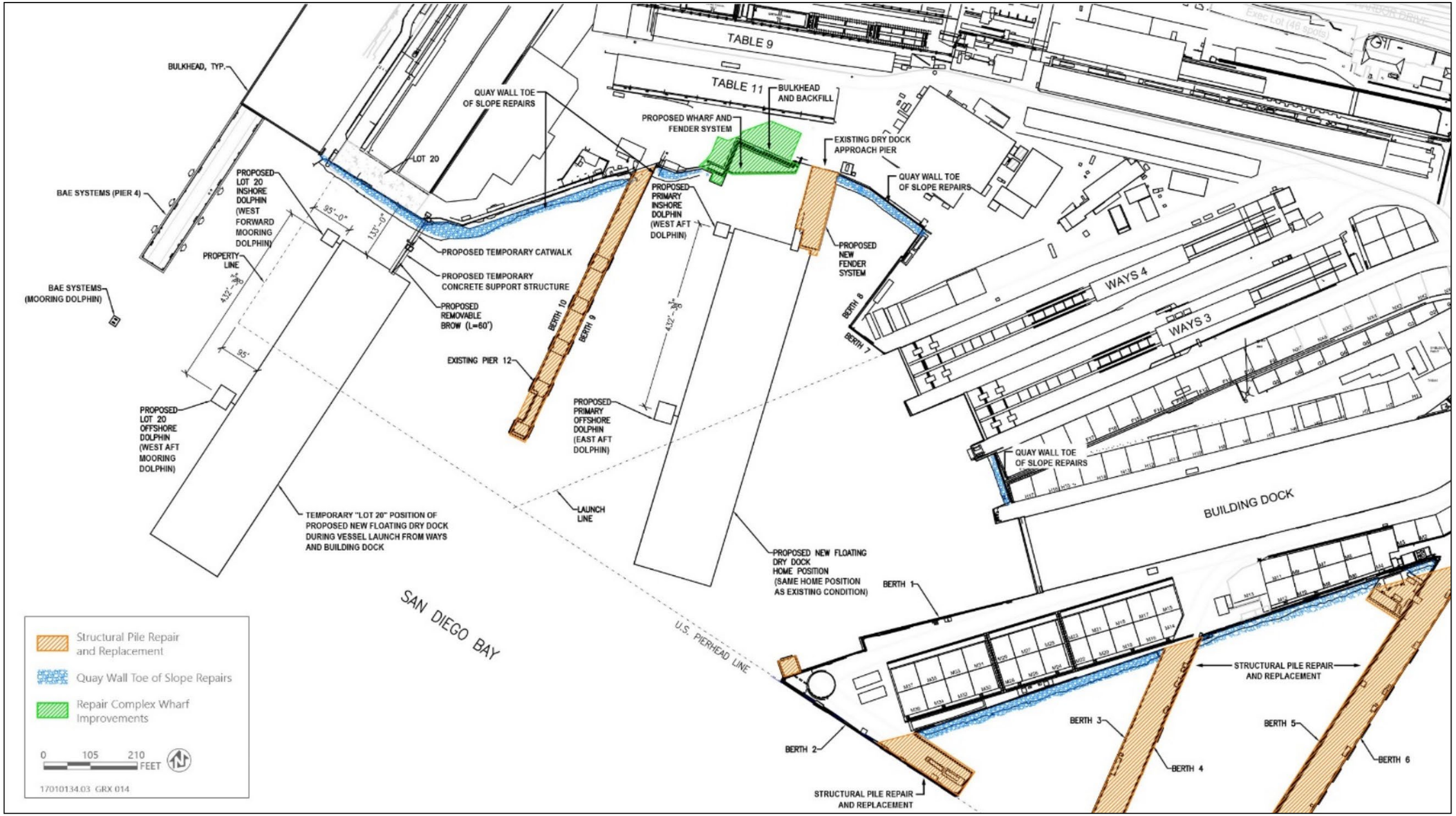
2.2.3 Project Components

The project includes replacement or repair to each of the components described below, including the floating dry dock, Repair Complex Wharf, revetment along the quay wall, and structural piles associated with berths and piers throughout the NASSCO leasehold. The following sections include a description of the existing conditions, proposed improvements, and construction methods for each of the project components. Existing shipyard facilities proposed for repair or improvement under the project are shown on Figure 2-3. The proposed site plan is shown on Figure 2-4.



Source: Figure by Anchor QEA, LLC in 2021; adapted by Ascent Environmental in 2021.

Figure 2-3 Existing Facilities



Source: Figure by Anchor QEA, LLC in 2021; adapted by Ascent Environmental in 2021.

Figure 2-4 Proposed Site Plan

2.2.3.1 Component 1 – Floating Dry Dock Replacement and Modification

Existing Conditions

The existing floating dry dock facilities consist of a floating dry dock, a pile-supported mooring dolphin (Figure 2-5), and a pile-supported approach pier with integrated mooring dolphin used for vehicle and pedestrian access to the floating dry dock. The existing floating dry dock is approximately 820 feet by 174 feet for a total area of 142,680 square feet. The existing mooring dolphin is approximately 56 feet by 26 feet for a total area of 1,456 square feet. The existing approach pier is approximately 33 feet by 17 feet for a total area of 1,561 square feet. Existing conditions include one 800 bhp (horsepower) tier-zero diesel emergency generator, which can be used for backup power in the event of an emergency such as a fire or flood.

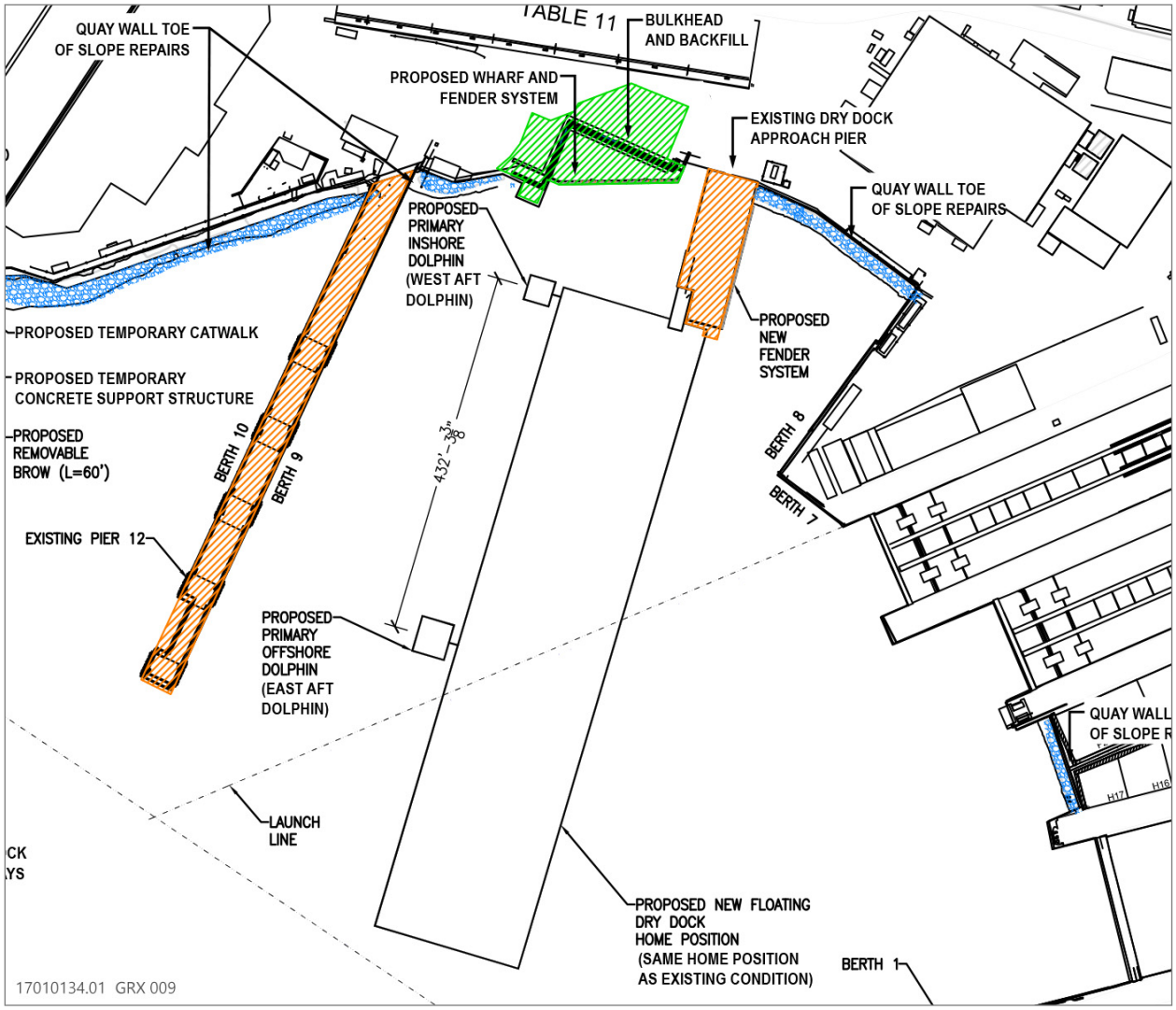
As shown in Figure 2-3, the home position for the existing floating dry dock is the primary location in which the floating dry dock is sited. The current configuration requires the floating dry dock to be relocated from the home position to another berth within the leasehold during vessel launches from the inclined building ways or building dock. Figure 2-3 shows the configuration of the floating dry dock under normal conditions. Figure 2-8 in the following section shows the trajectories from ingress and egress of vessels from the ways and building dock.

Source: Photograph by Anchor QEA, LLC in 2020.

Figure 2-5 View Looking North Showing Existing Dolphin Supporting the Dry Dock

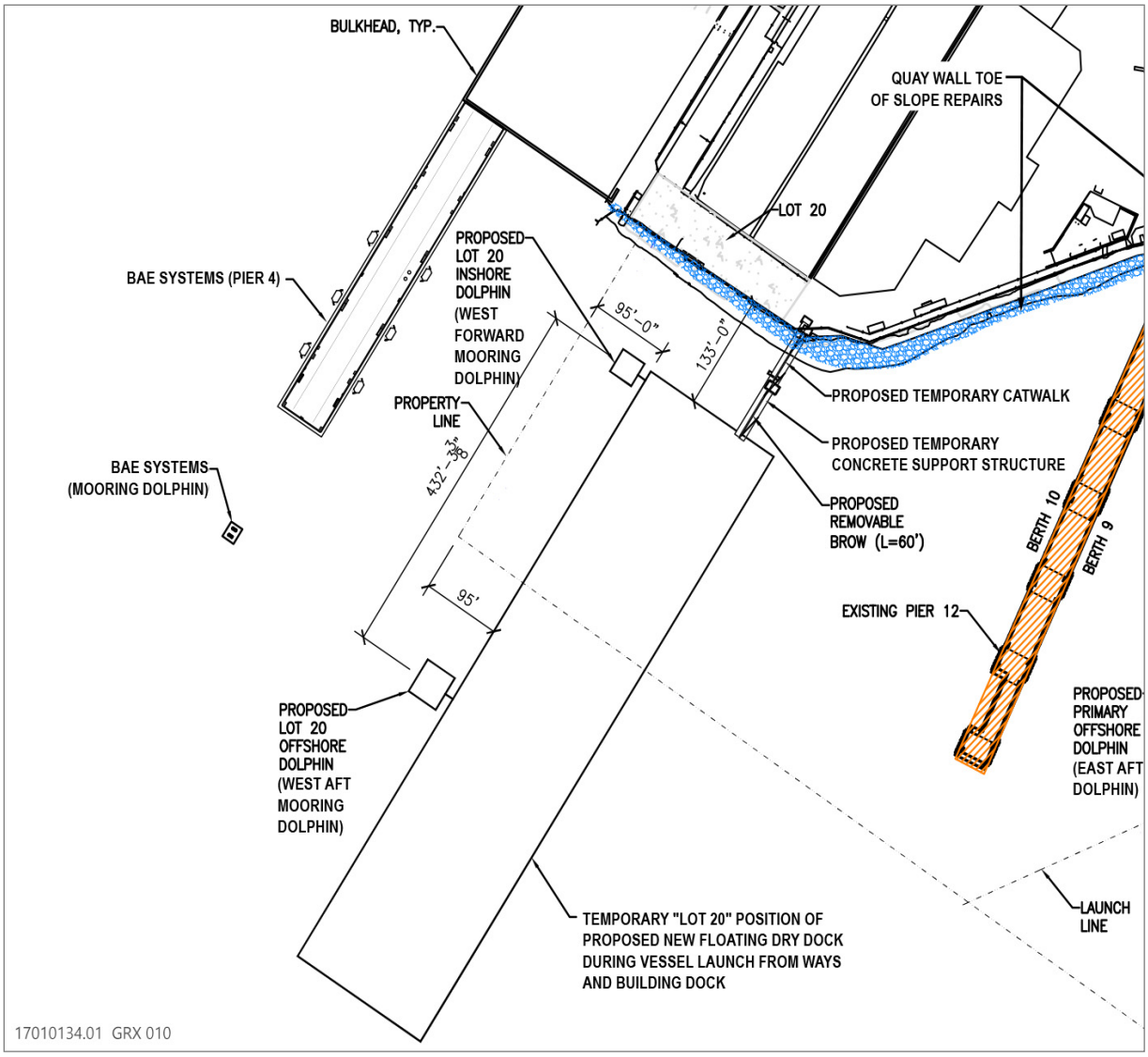
Proposed Improvements

To support the siting of the new floating dry dock, the existing mooring dolphin would be removed and replaced with four new concrete pile-supported mooring dolphins and associated fender systems (see Figure 2-4). The proposed east forward and east aft dolphins would support the floating dry dock in the home position, while the proposed west forward and west aft dolphins would support the floating dry dock in the temporary "Lot 20" position (see Figures 2-6 and 2-7). Structural piles on the existing approach pier would be repaired or replaced. In addition, a portion of the floating dry dock approach pier would be removed, and a new fender system would be installed. The project would also include a new temporary catwalk and gangway system for the new Lot 20 temporary position. The new floating dry dock would not require any additional draft (i.e., the distance between the waterline and the deepest point of the floating dry dock) as compared to the existing NASSCO floating dry dock; therefore, no additional or new dredging is proposed. In addition, no new dredging is proposed for the new Lot 20 temporary position.



Source: Figure by Anchor QEA, LLC in 2021; adapted by Ascent Environmental in 2021.

Figure 2-6 Home Position Project Elements



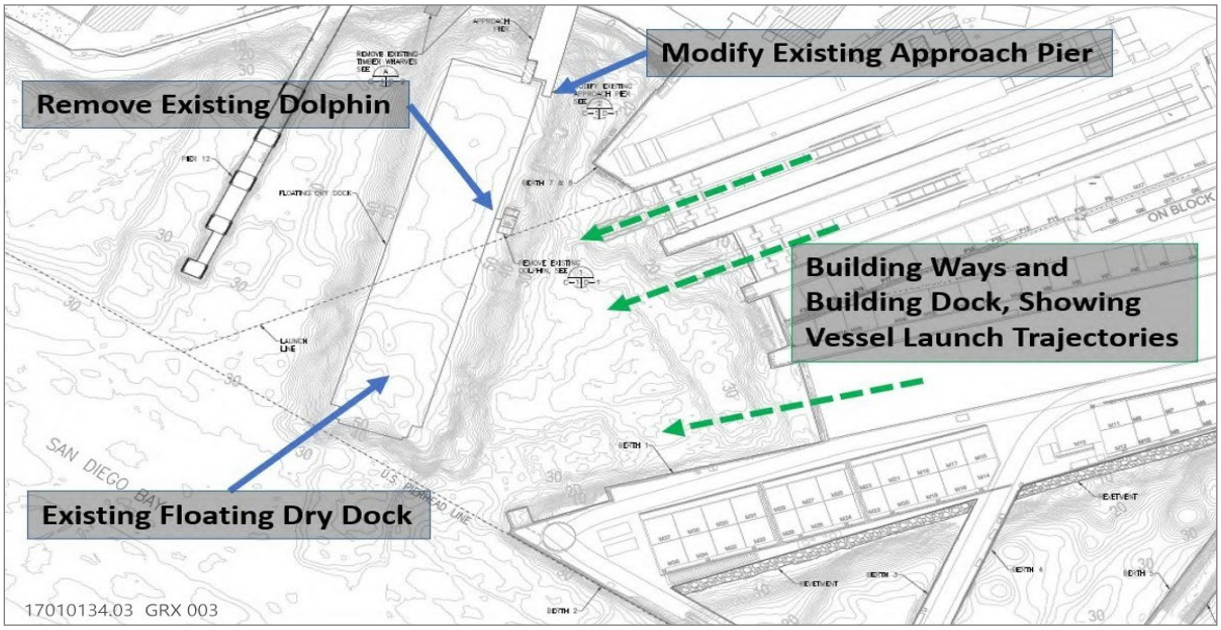
Source: Figure by Anchor QEA, LLC in 2021; adapted by Ascent Environmental in 2021.

Figure 2-7 Temporary "Lot 20" Project Elements

The replacement floating dry dock would be 828.54 feet long and 170.60 feet wide (slightly narrower and longer than the existing dry dock) and would have the same lifting capacity as the existing dry dock (35,000 long tons). Two 50-ton electric wing wall cranes would be installed to support ship repair operations. The entire area of the floating dry dock is contained to ensure that all stormwater can be collected and is outfitted with 178,000 gallons of onboard stormwater storage capacity. All coating systems within the ballast tanks as well as the exterior hull would be free of copper. Lastly, the existing 800 bhp tier-zero diesel emergency generator would be replaced with two U.S. Environmental Protection Agency (EPA) Tier 4-rated diesel generators and would be outfitted with a closed-loop cooling water system.

The new floating dry dock would be positioned in the same mooring location as the existing floating dry dock, as shown in Figure 2-3. The home position would continue to be the primary location in which the floating dry dock would be sited. The current configuration requires the floating dry dock to

be relocated from the home position to another berth farther from the home position during vessel launches from the inclined building ways or building dock (see Figure 2-8). As a result of the project improvements, the new floating dry dock would instead be repositioned to the Lot 20 temporary location west of Pier 12 during vessel launches from the ways and building dock (see Figures 2-4 and 2-7). Approximately four vessel launches would occur each year. During each vessel launch, the new floating dry dock would be temporarily relocated to the Lot 20 location for up to several days. Although the temporary positioning of the floating dry dock during vessel launches would change from existing conditions, no changes in operational activities would occur with the exception of reduced tug boat use due to more efficient operating conditions associated with use of the Lot 20 location.



Source: Figure by Anchor QEA, LLC in 2020.

Figure 2-8 Vessel Trajectories from Ways and Building Dock

The proposed new dolphins would be identical for the home and Lot 20 temporary locations (see Figures 2-4, 2-6, and 2-7). The east and west aft mooring dolphins would each be supported by 56 24-inch precast piles. The east and west forward mooring dolphins would each be supported by 22 24-inch octagonal precast concrete piles. The depth of the reinforced concrete pad for all four dolphins would be approximately 6 feet. Each of the four proposed dolphins includes a fender system to protect the floating dry dock when moored at both the home and Lot 20 temporary locations. Each fender system consists of fender piles, rubber fender units, timber whalers, and timber chocks installed along the length of each dolphin concrete pad. The wood fender blocks require a chemical preservative treatment to reduce the rate of wood rot and corrosion for materials within the water. The treatment would be in accordance with American Wood Protection Association UC5B Marine Use (Material Subject to Marine Borer Exposure) with waterborne preservative. As required by the USACE, all chemically treated wood that is in contact with the water and within the tidal zone would be wrapped to prevent the chemical contact with the water. To ensure worker safety, all treated wood would be handled by a licensed contractor in accordance with applicable regulations, including Division 20, Chapter 6.5, and Title 22, Division 4.5 of the California Health and Safety Code and Occupational Safety and Health Administration (OSHA) standards listed in 29 CFR 1910 Subpart H.

To access the floating dry dock when the dock is in its temporary position, an 80-foot catwalk and gangway system would be constructed near Lot 20. The outboard end of the catwalk and the inboard end of the gangway would be supported by a concrete cap constructed on a pair of 16-inch round or square concrete piles. A 60-foot removable brow would connect the catwalk to the floating pontoon when positioned in the temporary location (see Figures 2-4 and 2-7).

The existing drydock approach pier would be modified by removing a 33-foot-long by 16.5-foot-wide section at the waterward end. A new floating dry dock approach pier fender system would be installed to protect the floating dry dock approach pier, consisting of 19 fender piles, rubber fender units, timber whalers, and timber chocks installed along a 150-foot length along the eastern side of the approach pier. Like the dolphin fender systems, the wood fender blocks require a chemical preservative treatment to reduce the rate of wood rot and corrosion for materials within the water. As described above, the treatment would also be in accordance with American Wood Protection Association UC5B Marine Use (Material Subject to Marine Borer Exposure) with waterborne preservative and the same California Health and Safety Code and OSHA requirements mentioned previously would apply.

A comparison of the existing and proposed overwater coverage, pile counts, and fill values for each of the floating dry dock components is provided in Table 2-1.

Table 2-1. Comparison of Floating Dry Dock and Associated Infrastructure

Project Component	Estimated Overwater Coverage Area	Estimated In-Water Fill			
		Pile Type	Pile Quantity	Fill Area	Fill Volume
Existing (to be removed or replaced)					
Floating Dry Dock	142,680 sf	NA	NA	NA	NA
Mooring Dolphin	1,456 sf	20-inch precast concrete	37	81 sf	188 cy
Approach Pier	561 sf	20-inch precast concrete	5	11 sf	26 cy
Total Existing	144,697 sf	NA	42	92 sf	214 cy
Proposed					
Floating Dry Dock	141,349 sf	NA	NA	NA	NA
Catwalk and Removable Brow	400 sf (permanent), 300 sf (temporary)	16-inch round or square precast concrete	2	4 sf	6 cy
West Aft Dolphin	2,070 sf	24- inch octagonal precast concrete	56	158 sf (beneath deck)	252 cy
East Aft Dolphin	2,070 sf	24- inch octagonal precast concrete	56	158 sf (beneath deck)	334 cy
West Forward Dolphin	900 sf	24- inch octagonal precast concrete	22	62 sf (beneath deck)	99 cy

Project Component	Estimated Overwater Coverage Area	Estimated In-Water Fill			
		Pile Type	Pile Quantity	Fill Area	Fill Volume
East Forward Dolphin	900 sf	24- inch octagonal precast concrete	22	62 sf (beneath deck)	130 cy
West Aft Dolphin Fender	243 sf	HP14 x 89	18	3 sf	5 cy
East Aft Dolphin Fender	243 sf	HP14 x 89	18	3 sf	6 cy
West Forward Dolphin Fender	196 sf	HP14 x 89	15	3 sf	3 cy
East Forward Dolphin Fender	196 sf	HP14 x 89	15	3 sf	3 cy
Approach Pier Fender	300 sf	HP14 x 89	19	3 sf	5 cy
Total Proposed	148,867 sf (permanent), 300 sf (temporary)	NA	243	459 sf	843 cy
Net Change	+4,170 sf (permanent), 300 sf (temporary)	NA	+201	+367 sf	+629 cy

Construction Methods

The existing mooring dolphin, which is supported by 37 20-inch precast concrete piles, would be demolished. In addition, a 33-foot-long by 16.5-foot-wide section at the end of the existing dry dock approach pier would also be demolished. This section of pier is approximately 545 square feet in plan area and is supported by five 20-inch precast concrete piles. The existing piles would be removed from the seabed using vibratory extraction. The use of jetting, subject to any restrictions associated with mandatory mitigation measures, may be required to facilitate pile removal. If any given pile is damaged and cannot be extracted in its entirety, the contractor would cut the pile at or up to two feet below the existing mudline. The removed piles would be disposed of at an approved disposal site outside the coastal zone.

The existing floating dry dock would be sold outside of California or dispositioned in Ensenada, Mexico. The new floating dry dock would be constructed outside of the United States as well. Tugboats would be required to transport the existing and new floating dry docks to and from the NASSCO leasehold.

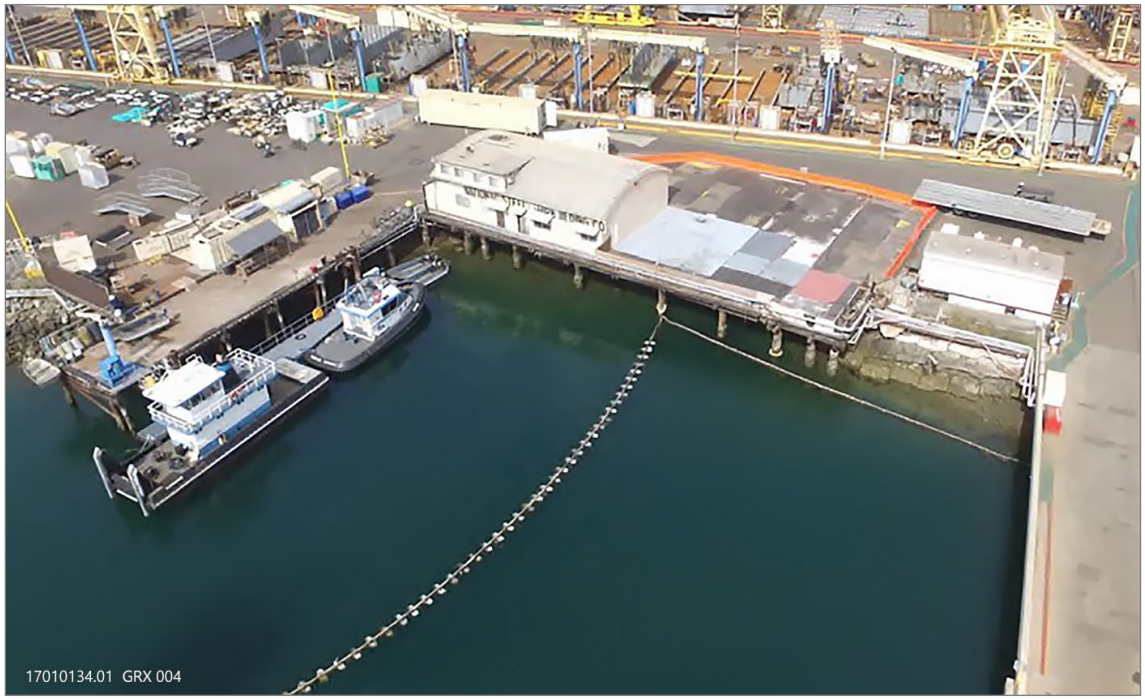
During construction of the new floating dry dock infrastructure, the new floating dry dock may be positioned at the temporary Lot 20 mooring facility upon delivery and until construction of the permanent mooring location is completed, which may be for a period up to six months. There may be a period of transition when both the existing floating dry dock and the new floating dry dock would be berthed within the NASSCO leasehold to allow shipbuilding and repair activities within the existing floating dry dock to be completed before fully transitioning to the new floating dry dock. During this transition period, only one floating dry dock would be operational.

The concrete piles proposed to support the new mooring dolphins, dry dock approach pier, and catwalk and removable brow would be installed with a crane-supported diesel impact hammer or vibratory hammer. Internal jetting may be used to facilitate pile installation by penetrating into relatively deeper and denser material layers; however, jetting would only be allowed if NASSCO can demonstrate to the District's satisfaction that there are no feasible alternatives to the use of internal jetting. Concrete mooring dolphin platforms would either be cast-in-place or partially pre-cast. For a cast-in-place system, construction would consist of installing the timber formwork, supported by steel-friction collars attached to the concrete piles. After the forms are set up, reinforcing steel would be installed. Concrete trucks would deliver concrete to the project site, and a pump truck would place the concrete into the forms. Timber forms and steel-friction collars would be removed after the concrete has cured for several days. Construction of the concrete decks would likely be divided into several concrete pours.

2.2.3.2 Component 2 - Repair Complex Wharf Replacement

Existing Conditions

The existing timber-constructed Repair Complex Wharf includes approximately 12,600 square feet of timber deck planks, timber stringers, and timber pile caps. The piles generally consist of a mix of round timber piles, round timber piles encased with a concrete jacket, steel H-piles (i.e., structural beams that are square in dimension and typically used for deep foundations), and concrete-filled steel pipe piles. In its current condition, the timber wharf is not useable to support repair operations. The existing building situated on the Repair Complex Wharf has been partially demolished and is anticipated to be fully demolished in accordance with the existing demolition permit. The location of the Repair Complex Wharf area is shown on Figure 2-3 and a photograph of the existing Repair Complex Wharf is shown on Figure 2-9.



Source: Photograph by Anchor QEA, LLC in 2020.

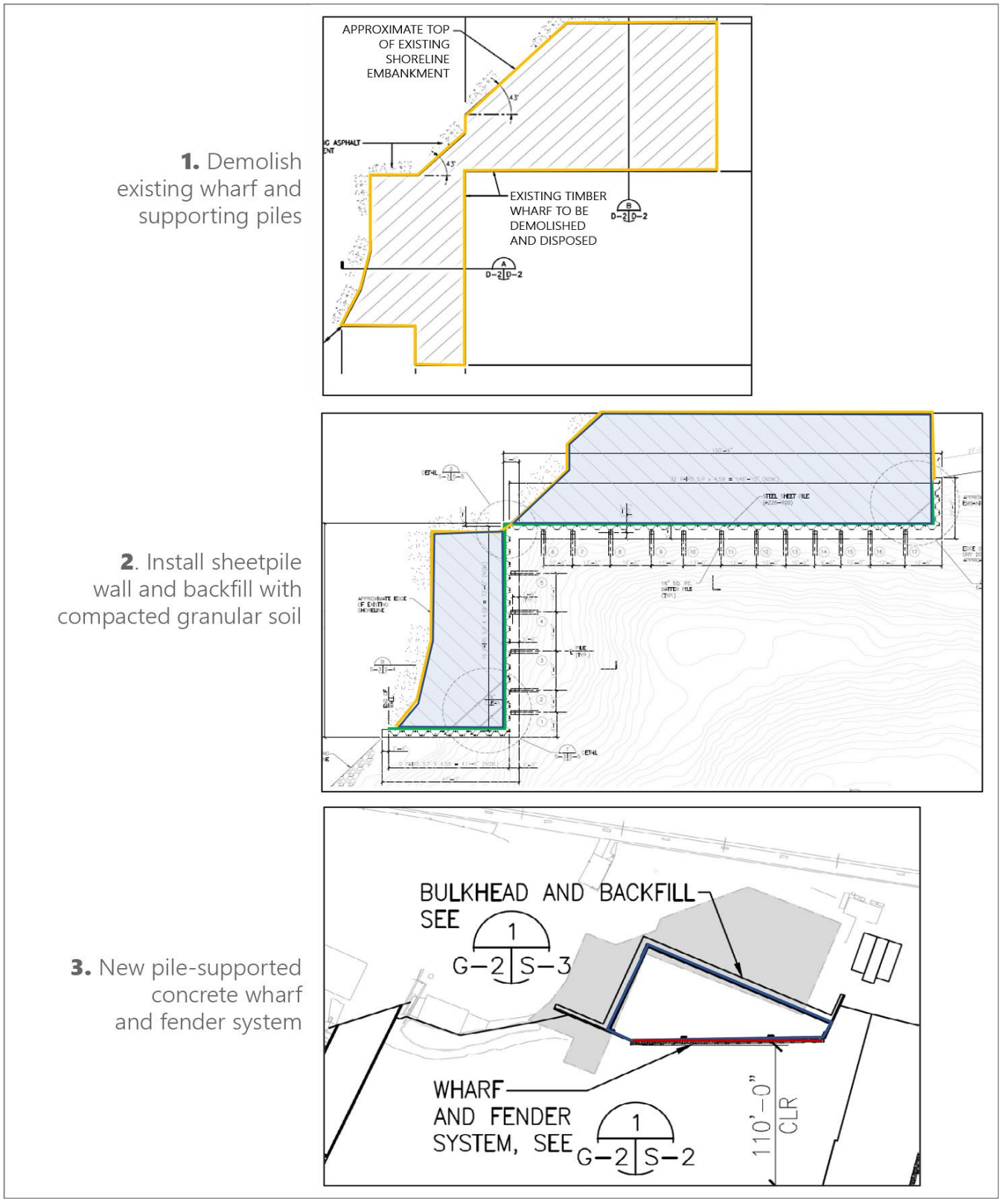
Figure 2-9 Existing Repair Complex Wharf

Proposed Improvements

The Repair Complex Wharf improvements entail replacement of the former timber wharf with a larger wharf supported by concrete piles and protected by a wharf fender system. A sheet-piled bulkhead (i.e., retaining wall) would be installed to reinforce the shoreline adjacent to the improved wharf.

The proposed wharf would be a triangular shaped structure with a plan area of approximately 6,330 square feet (see Figure 2-4). The wharf would consist of a concrete deck supported by 34 24-inch octagonal vertical precast concrete piles. The deck thickness would be nominally 20 inches. A fender system would be installed along the 140-foot-long water side edge of the proposed wharf. The fender system would be supported by 20 HP 14x89 piles (i.e., an H-pile with a 14-inch-wide section that weighs 89 pounds). The fender deck would consist of rubber fender units, timber whalers, and timber chocks. Wood preservation treatment would be the same as previously described, and in accordance with American Wood Protection Association UC5B Marine Use (Material Subject to Marine Borer Exposure) with waterborne preservative.

The existing building situated on the wharf (Building 19) would be demolished prior to project construction. Demolition of Building 19 would occur as part of a separate action to improve vehicle and pedestrian traffic flow throughout the NASSCO shipyard, which was previously analyzed and permitted by the District (ICF 2018). The remaining wharf deck, supporting piles, and other supporting infrastructure (e.g., utilities) would be demolished and replaced as part of the project. The project would include removal and disposal of approximately 100 supporting piles. These piles will be disposed of at an approved disposal site outside the coastal zone, which, if necessary, would occur at an appropriate landfill that accepts hazardous waste (see Section 2.2.6.4 for additional information). Following pile removal, a steel sheet-piled bulkhead would be installed along the 293-foot shoreline face adjacent to the proposed wharf. The bulkhead would be laterally supported by precast batter piles and restrained laterally by a series of 18-inch square precast concrete batter piles installed at a 3:1 sloped angle towards the water. The sheet piles would be capped by a reinforced concrete beam 5.5 feet wide and 4 feet deep. Gravel backfill and compacted granular backfill would be placed at the location of the existing wharf behind the sheet pile bulkhead to match the elevation of existing upland paving. Following installation of the sheet pile bulkhead and placement of backfill, the new pile-supported concrete wharf and fender system would be constructed just south of the existing wharf. Construction sequencing to replace the Repair Complex Wharf is presented in Figure 2-10.



Source: Figure by Anchor QEA, LLC in 2020; adapted by Ascent Environmental in 2021.

Figure 2-10 Repair Complex Wharf Construction Sequencing

The proposed overwater coverage, pile counts, and fill values for each of the proposed Repair Complex Wharf improvement components is provided in Table 2-2.

Table 2-2. Repair Complex Wharf Improvements

Project Feature	Estimated Overwater Coverage Area	Estimated Fill						
		Pile Type	Pile Quantity	Pile Area	Pile Fill Volume	Backfill Material	Backfill Area	Backfill Volume
Existing (to be demolished or replaced)								
Repair Complex Wharf	12,600 sf	Mix of round timber piles, round timber piles encased with a concrete jacket, steel H-piles, and concrete-filled steel pipe piles	100[1]	100 sf	20 cy	Existing (NA)	Existing (NA)	Existing (NA)
Proposed								
Repair Complex Wharf Sheet pile Wall and Backfill	12,000 sf	Steel sheet pile	128 sheet pile sections (293 linear feet)	216 sf (beneath wharf)	182 cy	Sheet pile wall and compacted granular backfill	12,003 sf	3,357 cy
Repair Complex Wharf (Concrete Pad)	6,330 sf	24-inch octagonal precast concrete piles	34	96 sf (beneath wharf)	70 cy	NA	NA	NA
		18-inch square precast concrete batter piles	24	54 sf (beneath pile cap and wharf)	38 cy	NA	NA	NA
Repair Complex Wharf (Fender System)	310 sf	HP14x89 Fender Pile	20	3 sf	3 cy	NA	NA	NA
Total Proposed	18,640 sf	NA	78 piles plus 293 linear feet of sheet pile	3 sf (only includes fender system)	293 cy	NA	12,003 sf	3,357 cy
Net Change	+6,040 sf	NA	-22 piles/+293 linear feet of sheet pile	+272 sf	+566 cy	NA	+12,203 sf	+3,357 cy

[1] The pile fill area and pile fill volume of the existing piles at the Repair Complex Wharf are not known because not all piles are accessible until the wharf deck is removed. Current conditions are unsafe to get an accurate count of the number of piles under the Repair Complex Wharf; however, an estimate of 100 piles has been used based on the size of the area.

Construction Methods

The existing pile supported timber Repair Complex Wharf structure would be demolished and all materials disposed of offsite. The total wharf area to be demolished is approximately 12,600 square feet consisting of timber deck planks, timber stringers, and timber pile caps. The piles consist of a mix of round timber piles, round timber piles encased with a concrete jacket, and concrete filled steel pipe piles. As described in Section 2.2.4.1 above, the existing piles would be removed from the bay floor using vibratory extraction. The replacement pile would be installed with a diesel impact hammer or vibratory hammer. Internal jetting may be used to facilitate pile installation by penetrating into relatively deeper and denser material layers; however, jetting would only be allowed if NASSCO can demonstrate to the District's satisfaction that there are no feasible alternatives to the use of internal jetting. If any given pile is damaged and cannot be extracted in its entirety, the contractor would cut the pile at or up to two feet below the existing mudline. The removed piles would be disposed of at an approved disposal site outside the coastal zone.

The sheet pile wall would be installed using a crane-supported impact or vibratory pile driver. Gravel backfill would be brought to the site using either a barge or trucked in from the uplands. The material would be placed behind (landward of) the sheet pile wall by offloading directly from a truck or using an excavator positioned from the uplands or on a flat deck barge.

The concrete piles, wharf fender piles, and sheet piles would be installed with the same method described above for the floating dry dock dolphins. The wharf deck would also be constructed with the same method described above for the concrete mooring dolphin platforms (either cast- in-place or pre-cast).

2.2.3.3 Component 3 – Quay Wall Revetment Repairs and Replacement

Existing Conditions

The project would include repairs to the quay wall and supporting revetments in front of the quay wall at several areas, including Lot 20 to Pier 12, floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base Quay Wall (Figure 2-3 and Figure 2-11). Existing conditions within these areas are summarized in the following sections.

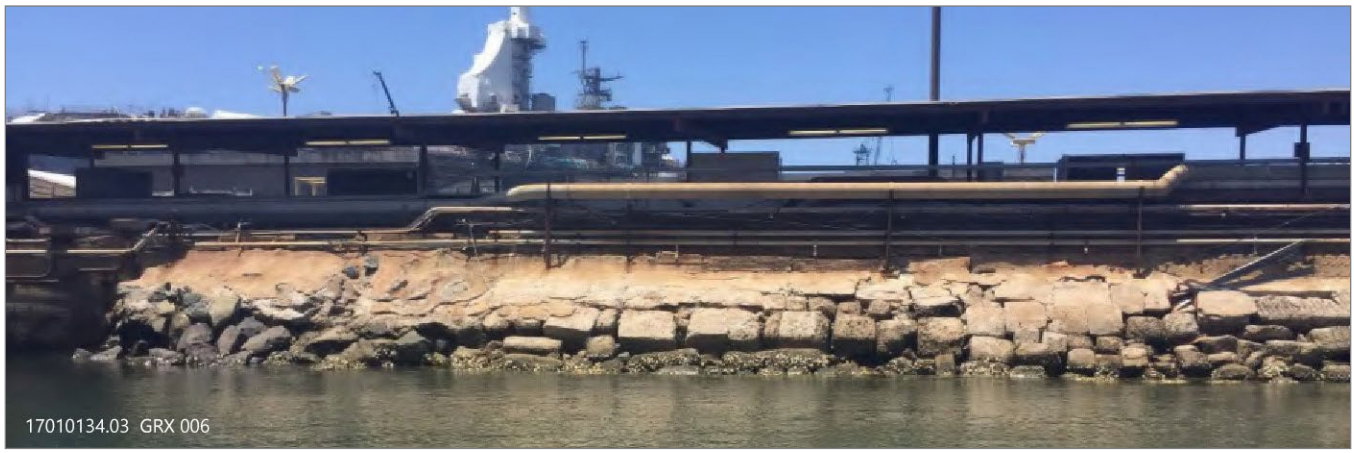
Berth 2 and Berth 3 Revetment

An approximately 550-foot-long section of sloping revetment extends between Berth 2 and Berth 3 (Figure 2-3). The revetment between Berths 2 and 3 is constructed from concrete elements, including layers of flat slabs or blocks forming a steeply sloped wall (approximate 2:1 slope; Figure 2-11). Portions of the sloped revetment slabs and blocks are cemented together, and some areas contain additional rock riprap at the toe of slope. At the top of the revetment, there is an approximately 4-foot-high vertical cemented stone wall. Numerous utility pipes are present on the stone wall.

The 300-foot western portion of revetment connects the Berth 2 pier with the Berth 3 pier (Figure 2-11). This western revetment length is constructed from large square and rectangular concrete blocks stacked to form a sloped wall. The top 6 to 8 feet of the sloped revetment is covered with a layer of binding cement mortar, which has mostly fractured and broken away. Towards the middle of the western revetment, the style of revetment changes to layered flat concrete slabs similar to other revetment areas throughout the facility. The first approximately 100 feet of this section of revetment has undergone repair using a cement mortar to fill voids. The remaining 200 feet of layered concrete slab revetment is considered to be in fair condition.

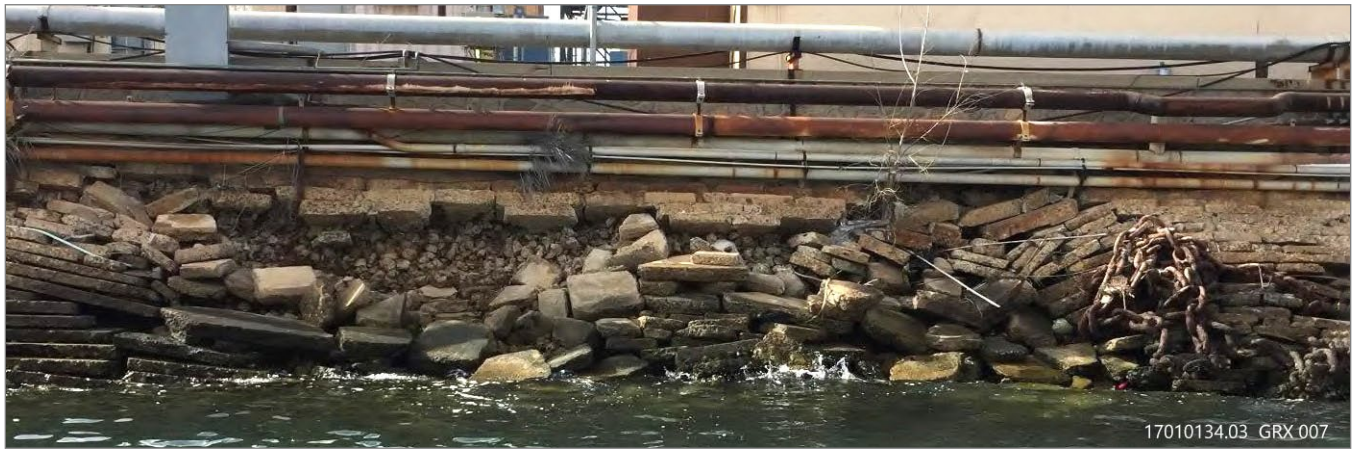
Source: Photograph by Anchor QEA, LLC in 2020.

Revetment Between Berth 2 and Berth 3.



Source: Photograph by Anchor QEA, LLC in 2020.

West End of Berth 2 and Berth 3 Revetment.



Source: Photograph by Anchor QEA, LLC in 2020.

Collapsed Portion of Berth 4 and Berth 5 Revetment.

Figure 2-11 Existing Quay Wall Revetment

Berth 4 and Berth 5 Revetment

An approximately 400-foot-long section of revetment extends between Berth 4 and Berth 5 (Figure 2-3). This length of revetment is constructed from layers of concrete slabs. Some of the slabs near the waterside launch rail have partially collapsed (Figure 2-11). Directly east of this collapsed area, a previous repair is visible where an additional layer of riprap was placed and voids were grouted. The observed quay wall revetment distress is likely caused by wave action and pressure created by tidal fluctuations. The areas that show major distress at both revetments appear to be in areas more directly exposed to prevailing bay current and wave action and less sheltered by adjacent pier structures.

Proposed Improvements

The project would include repairs to the failed revetments along the 950 linear feet of exposed shoreline between Berth 2 and Berth 5 (Figure 2-4). The project would also include as-needed repairs to an additional 1,500 linear feet of exposed shoreline segments (up to 500 feet per year for three years), including Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall. In total, quay wall revetment repairs would occur along approximately 2,450 linear feet within the leasehold. Repairs of the revetment would include building up a new rock toe, overlaid with an approximate 9-inch layer of filter stone and 2-foot layer of quarter-ton rock riprap. Grout bags and concrete may also be placed to fill voids on the failed slope. Fill would be underlain with filter fabric. Fill values associated with the quay wall and revetment repair are provided in Table 2-3.

Table 2-3. Proposed Revetment Repairs Along Quay Wall

	Backfill Quantities			
Project Feature	Material	Length	Area	Volume
Revetment Repairs Along Quay Wall	Filter fabric, filter stone, quarter-ton rip rap	2,450 feet	53,900 sf	18,640 cy

Construction Methods

Revetment repairs along selected segments of quay wall would be conducted from the landside, waterside, or from a combination of both. Earthmoving equipment would likely include an articulated long-reach bucket arm, skip loader, and/or front-end loader. The work would include minor regrading of the existing revetment surface, possibly including removal of irregularities or debris to provide a consistent surface for installation of geotextile fabric and concrete-filled nylon bags when conducting slope stabilization on the top of the slope. Along the slope and toe of the slope, typical materials for revetment (e.g., geotextile fabric, filter stone, and riprap) would be installed to match the existing adjacent slopes.

2.2.3.4 Component 4 – Structural Pile Repair and Replacement

Existing Conditions

Several existing structural piles that support Berths 2, 3, 4, 5, 6, and Pier 12, and the floating dry dock approach pier and the Berth 1 Platform show signs of damage. Specifically, the existing steel-jacketed concrete piles, concrete-filled steel pipe piles, and H-piles show signs of deterioration, cracking, corrosion, and wear. Throughout the leasehold, there are approximately 957 piles supporting the various wharves and piers, ranging in size from 14 to 20 inches. A summary of piles at each location is presented in Table 2-4.

Table 2-4. Structural Piles Proposed for Repair or Replacement

Structure	Range of Water Depth (MLLW)	Number of Piles	Type of Pile	Existing Pile Fill Area (sf)	Proposed Jacketed Pile Fill Area (sf)	Net Change (sf)	Existing Pile Volume (cy)	Proposed Pile Fill Volume (cy)	Net Change (cy)
Dry Dock Approach Pier	+8 to -55	76	20-inch square precast concrete	211	304	+93	234	338	+104
Berth 2 Extension	+8 to -14	91	16-inch square precast concrete (19) 16-inch octagonal precast concrete (60) 13-inch-diameter steel pipe (12)	133	230	+97	148	256	+108
Berths 3/4	+6 to -28	195	16-inch octagonal precast concrete	287	515	+228	319	572	+253
Platform Extension to Berths 3/4	-27 to -30	14	13-inch-diameter steel pipe pile	13	22	+9	14	24	+10
Berths 5/6	+8 to -30	344	16-inch octagonal precast concrete (96) 18-inch octagonal precast concrete (246) 14-inch steel H-pile (2)	599	1,030	+431	666	1,144	+478
Hatch Platform at Berth 5	+8 to -12	12	14-inch steel H-pile	2.2	27	+24.8	2	30	+28
Dry Dock Mooring Dolphin	-45 to -55	37	20-inch square precast concrete	66	148	+82	73	164	+91

Structure	Range of Water Depth (MLLW)	Number of Piles	Type of Pile	Existing Pile Fill Area (sf)	Proposed Jacketed Pile Fill Area (sf)	Net Change (sf)	Existing Pile Volume (cy)	Proposed Pile Fill Volume (cy)	Net Change (cy)
Pier 12	0 to -26	188	12-inch square precast concrete (56) 12-inch diameter steel pipe (119) 12-inch square precast concrete (8) 12-inch steel H-pile (5)	177	513	+336	197	570	+373
Total	**--**	**957**	**--**	**1,488**	**2,789**	**+1,301**	**1,654**	**3,099**	**+1,445**

Proposed Improvements

Structure pile repairs and replacement at Berths 2, 3, 4, 5, 6, and Pier 12, and the floating dry dock approach pier and the Berth 1 Platform would address deficiencies in steel pipe piles, steel-jacketed concrete piles, concrete-filled steel, and steel H-piles. Approximately 100 piles would be repaired or replaced per year, which would require approximately 25-30 days of construction per year. Piles will be replaced over a period of 10 years. The distribution may change based on the need at the facility, but the total number would not exceed 100 per year and 10 per day (Table 2-4). If condition of the structural piles is beyond repair, the piles would be replaced in kind with the same dimension and material. Proposed pile fill and volumes in the table below are based on repairs to existing piles. Repair can include putting a steel jacket around the existing pile, which increased the diameter. If in-kind replacement is proposed, there would be no net change in pile fill or area.

Construction Methods

Structural Pile Replacement

Structural pile replacement would occur if the condition for piles is judged to be too damaged or degraded to be reasonably repaired. Pile replacements would be "like for like," with equivalently sized piles used for replacement. To access the pile, the top deck section would be temporarily removed. As described above, existing piles would be removed from the bay floor using vibratory extraction. The use of jetting, subject to any restrictions associated with mandatory mitigation measures, may be required to facilitate pile removal. If any given pile is damaged and cannot be extracted in its entirety, the contractor would cut the pile at or up to two feet below the existing mudline. The removed piles would be disposed of at an approved disposal site outside the coastal zone. The replacement pile would be installed with a diesel impact hammer or vibratory hammer.

Steel-jacketed Concrete Pile

Proposed steel jacketed concrete pile repairs would be made to piles showing severe corrosion of the steel jackets. Deteriorated steel jackets would be removed, repairs would be made to the underlying concrete, and new pile jackets would be installed. Delaminated and spalled areas would be demolished and filled with grout in conjunction with the installation of a new steel jacket. New pile jackets would include sacrificial cathodic protection (i.e., a form of corrosion protection with demonstrated ability to extend the service life of concrete piles in coastal environments).

A summary of the sequence of the proposed repairs is as follows:

1. Temporary scaffolding and/or floating platforms would be used for pile repairs.
2. In spalled areas, deteriorated concrete would be removed in a similar manner as is described above for underdeck concrete repair. Any debris collected during the work would be disposed at an approved disposal location.
3. Selected cracks would be injected with an epoxy resin or paste if the adjacent concrete is sound.
4. All concrete piles would receive a zinc cathodic protection jacket.

Concrete-filled Steel Pipe Pile

For piles experiencing severe corrosion and section loss, including through-thickness holes above the water line, replacement sections of concrete-filled steel pipe would be installed. The existing

steel pile would be cut and removed at the water line to a point where section loss is no longer present. Next, a welded/mechanical ring connection would be installed in conjunction with the jacket installation to tie the new pile section to the existing pile section. Sacrificial bulk anodes would be installed to protect the below-water portions of the exposed steel. The method of jacket installation for the steel pipe is similar to the method that would be used to replace steel jackets on concrete piles, as discussed above.

Steel H-Pile

Proposed steel H-pile repairs would address corrosion above the water line. The existing steel pile would be cut and removed at the water line to a point where section loss is no longer present. Next, a welded/mechanical ring connection would be installed in conjunction with the jacket installation to tie the new pile section to the existing pile section. The jacket type would be similar to the structural concrete jacket described above. Sacrificial bulk anodes would be installed to protect the below-water portions of the exposed steel.

A summary of the sequence of the proposed H-pile repairs is as follows:

1. Pile surfaces would be cleaned by water blasting or a rotary abrading device to remove all loose clinging material, heavy scaling, marine growth, oil, debris, and other bond-inhibiting materials.
2. Protective corrosion-free jackets (cathodic protection pile jacket) would be installed with compressible sealing strip at the bottom.
3. Temporary supports, braces, and standoffs would be provided to hold jacket forms in position until grout has been placed and cured.
4. The interior of the jacket would be filled with cementitious grout that is designed to cure underwater. Grouting would be done within 24 hours after completion of cleaning operations and allowed to cure for at least 6 hours.
5. Reinforcing steel would be integrated into the grouted annular space between the fiberglass jacket and the H-piles to provide additional support.

2.2.4 Coverage and Fill Volume Summary

Table 2-5 summarizes net overwater coverage and fill volumes for the project. Note that Table 2-5 assumes that structural piles would be repaired, not replaced. If repair is infeasible, the replaced pile would match the existing pile and would not result in any net increase in fill or overwater coverage.

Table 2-5. Overwater Coverage and In-water Fill Values

Project Component	Overwater Coverage	Fill Area	Fill Volume
Existing (to be replaced or demolished)			
Floating Dry Dock, Mooring Dolphin, and Approach Pier	144,697 sf	92 sf	214 cy
Repair Complex Wharf	12,600 sf	100 sf[1]	20 cy[1]
Quay Wall	--	53,900 sf	10,700 cy
Structural Piles	--	1,488 sf	1,654 cy
Total Existing	157,297 sf	55,580 sf	12,588 cy
Proposed			
Floating Dry Dock, Catwalk and Removable Brow, Mooring Dolphins and Dolphin Fenders, and Approach Pier Fender	148,867 sf (permanent) 300 sf (temporary)	459 sf	843 cy
Repair Complex Wharf (Sheet Pile Wall and Backfill, Concrete Pad, and Fender System)	18,640 sf	12,003 sf (including backfill and fender piles)	3,357 cy (including backfill and pile fill)
Quay Wall Revetment Repairs and Replacement	--	53,900 sf	Additional 7,940 cy for a total of 18,640cy
Structural Pile Repair and Replacement	--	2,789 sf	3,099 cy
Total Proposed	167,507 sf (permanent) 300 sf (temporary)	69,151 sf	25,939 cy
Net Total	+10,210 sf (permanent) +300 sf (temporary)	+13,571 sf	+13,351 cy

[1] The pile fill area and pile fill volume of the existing piles at the Repair Complex Wharf are not known because not all piles are accessible until the wharf deck is removed. Current conditions are unsafe to get an accurate count of the number of piles under the Repair Complex Wharf; however, an estimate of 100 piles has been used based on the size of the area.

2.2.5 Project Construction

2.2.5.1 Construction Schedule

Construction of the various project components is anticipated to occur as follows:

- Floating Dry Dock Replacement and Modification: January 2024 to September 2025
- Repair Complex Wharf Improvements: September 2025 to July 2026
- Quay Wall Revetment Repairs (Berths 2-5): January 2025 to February 2025
- As-needed Quay Wall Revetment Repairs (additional 1,500 linear feet): January 2026 to December 2028 (500 linear feet per year)
- Structural Pile Repair and Replacement: January 2025 to January 2034 (100 piles per year as needed)

The anticipated construction schedule is approximate and is provided for analysis purposes. The actual start and end dates for construction of the project components may vary, but the duration is not anticipated to change.

Construction activities would occur 24 hours per day and seven days per week, in a manner consistent with the City of San Diego Noise Ordinance (Section 21.0104 of the San Diego Municipal Code). Construction work during night-time hours (between 7:00 p.m. and 7:00 a.m.) would be limited to project deliveries, formwork, welding, and other activities that would not generate disturbing, excessive, or offensive noise. Pile driving activities would only be conducted during daylight hours.

2.2.5.2 Construction Equipment and Workers

It is anticipated that the following equipment would be required to implement the project:

- Floating deck barge with spud well system
- Crane for pile installation
- Tugboat to support crane barge
- Vibratory and/or diesel impact pile driver for pile installation
- Floating scows for material shuttling to crane barge
- Push boats to shuttle personnel and small equipment
- Concrete pump and boom
- Portable welding units for overwater welding
- Diesel powered generators for barge power

Up to 10 construction workers would be present on the construction site each day, including one tug operator, two crane operators, one foreman, two oilers, and four laborers. Aside from construction worker commute trips, construction activities are anticipated to generate approximately two contractor vehicle truck trips per day for miscellaneous material and equipment loading. Contractor equipment and materials would generally be mobilized and demobilized from the water side of the project site and by using a barge. In addition, as a project feature, at least 75 percent of off-road diesel construction equipment (greater than 50 horsepower) would meet Tier 4 (final) California Emissions Standards for off-road diesel engines.

2.2.5.3 Construction Staging and Parking

Existing designated areas at or near the construction site would be utilized for staging or laydown. Material delivery, staging, and maneuvering of materials in water would be conducted by deck barges and tugboats. All proposed construction elements would be over water and would require specific safety standards and best management practices (BMPs). Construction would adhere to established construction BMPs as detailed in Section 2.2.6.5.

The contractor hired to perform the work would be required to park within the limits of the project site in designated equipment and material staging areas, which would ensure existing parking for NASSCO employees or other public parking would not be displaced. If needed due to limited space at various times throughout the construction activities, the contractor would use high occupancy

vehicles to transport the approximately 10 construction workers from the contractor's facility to the project site and back daily.

2.2.5.4 Construction Waste and Disposal

The existing floating dry dock would be sold or dispositioned outside of the State. Non-hazardous construction trash and debris would be sent to approved recycling facilities in compliance with Assembly Bill (AB) 939, AB 341, and the City's Construction and Demolition (C&D) Debris Deposit Ordinance. A minimum of 65 percent of the construction waste would be recycled in accordance with the City of San Diego C&D Debris Deposit Ordinance. Remaining non-hazardous trash and debris that cannot be recycled would be handled through NASSCO's current trash hauler, Republic Services, and disposed at local landfills located outside the coastal zone. These landfills may include Republic Services Sycamore and Otay Landfills in San Diego County, California.

Removal of the existing Repair Complex Wharf is anticipated to generate approximately 100 creosote-treated timber piles. In conformance with California Department of Toxic Substances Control standards, the timber piles would be managed, manifested, and transported to a permitted landfill for disposal.

If other hazardous waste is generated, Resource Conservation and Recovery Act (RCRA) and non-RCRA hazardous waste would be removed by NASSCO's current hazardous waste haulers, Univar Solutions or US Ecology. All hazardous waste would be transported under a waste manifest to an authorized hazardous waste Treatment, Storage, and Disposal Facility. These facilities may include US Ecology/Univar Solutions Clearfield Plant in Clearfield, Utah; Clean Harbors Buttonwillow LLC in Buttonwillow, California; or US Ecology Nevada in Beatty, Nevada.

2.2.5.5 Construction Best Management Practices

During construction, BMPs would be implemented, as presented in the following subsections. During the District's project review and approval process, all BMPs would be incorporated as conditions of project approval in the CDP. The applicant would be responsible for meeting the conditions of the CDP and the District would be responsible for enforcing compliance. Where either the mitigation measure or BMP includes a more stringent requirement related to an identical issue and both cannot be successfully accomplished, the more stringent of the two shall take precedent.

General Construction Best Management Practices

Currently, all stormwater runoff from the facility, including from overwater structures, is captured and contained for subsequent discharge to the San Diego Metropolitan Sanitary Sewer System. During construction, the contractor shall comply with permit conditions imposed by the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and other regulatory agencies. The following standard BMPs would be implemented:

- Floating debris will be removed from the water and disposed of properly.
- Disposal of construction and trash debris into the intertidal zone or nearshore waters is prohibited.
- All construction-related equipment will be maintained in good-working order to minimize the potential for hazardous waste spills.
- Current hazardous material spill prevention and cleanup plans will be maintained on site.

- Food-related trash items, such as wrappers, cans, bottles, and food scraps, will be disposed of in white skip tub containers and removed from the project site daily.
- Materials or supplies will be stored in a manner to avoid entrapment of wildlife and will be checked for the presence of wildlife before movement or use.
- Temporary portable restroom facilities may be used to ensure reasonable access to restroom facilities for construction workers. If used, temporary portable restroom facilities will be placed away from watercourses and storm drains.
- A scaffolding system or floating rafts will be placed under the wharf and pier to catch demolition debris.
- NASSCO will perform the waste determination on removed treated timber piles and pile stubs to determine the level of disposal facility that would be required.
- Temporary erosion and sedimentation control measures will be implemented throughout the project construction period, where applicable.
- All debris will be transported to, and disposed of, at an appropriate upland disposal site, or recycled, if appropriate.
- Excavated material will be disposed of at an upland disposal site. Wet and water-bearing materials will be dewatered before hauling off-site.
- Idling time and dust suppression requirements for commercial vehicles and construction equipment will comply with San Diego County Air Pollution Control District. Idling will not be allowed for more than a 5-minute period, and temporary areas of disturbance will be treated with water or dust suppressant to prevent visible emissions of dust.
- Areas disturbed by construction activities, including staging areas, will be restored after construction. Restoration may include regrading, repaving, and other measures deemed appropriate. Disturbed areas will be restored as quickly as feasible at the end of the construction period to minimize the potential for windblown dust. Site restoration will be implemented in accordance with NASSCO's individual National Pollutant Discharge Elimination System (NPDES) permit or a future shipyard general permit.
- Temporary traffic control plan guidelines and BMPs will be implemented from the contractor's Traffic Control Plan and NASSCO's Facility Traffic Control BMPs. The contractor will develop a Traffic Control Plan, which will include approved state and local traffic truck routes to major highways and will apply to local roadways and streets outside of the NASSCO facility. The NASSCO Facility Traffic Control BMPs will govern inside the NASSCO facility.

Biological Resources Best Management Practices

The following biological resource BMPs are from NASSCO's BMP Plan and would be implemented:

- The contractor will be required to avoid covering and disturbing any low-relief boulders that may support higher numbers of intertidal organisms, where possible.
- Consistent with the California Coastal Act and California Eelgrass Mitigation Policy (CEMP), a pre-construction eelgrass and Caulerpa taxifolia survey will be performed in the project area 30 to 60 days before commencement of proposed in- or over-water construction

activities; a post-construction survey shall be performed if eelgrass is located during the pre-construction survey.

- Equipment operators and all other project workers are prohibited from harassing any marine mammals, turtles, birds including waterfowl, or fish in the project area.
- A scaffolding system or floating rafts will be used for containment of debris from underdeck repairs. Scaffolding will be covered with plywood panels to contain debris, and debris will be removed at end of each shift.
- Cementitious repair material will be placed in dry conditions at available low tides.

Pile Driving and Repair Best Management Practices

Pile installation or removal shall be conducted in a manner that meets applicable permit requirements, including those required by the Clean Water Act Section 404 permit and Clean Water Act Section 401 Water Quality Certification. The measures described below are required based on the type of pile installation, or removal, that occurs.

Impact (and Vibratory) Hammer Pile Driving

- The pile driving contractor will conduct a visual scan before commencing any pile-driving operations to ensure no sensitive species are within the immediate vicinity of pile hammering and will employ soft-start techniques for any impact pile driving.

Pile Repairs

- For repairs below ordinary high water, only materials suitable for use in aquatic environments will be used, including, but not limited to, cementitious grout designed to cure underwater and multipurpose marine epoxy grout and binder.
- The contractor will employ ports with gauges and additional ports, vents, and valves necessary to ensure a successful grouting operation resulting in a dense annular grout that meets the requirements of the form manufacturer.
- Temporary supports and braces, as well as non-corrosive standoffs, will be used to maintain the jackets in required positions.

Transportation and Parking Best Management Practices

Truck Routes

NASSCO will inform all construction contractors of City Resolution R-2019-294 and the designated truck routes it established by providing a truck route and prohibition map as part of the construction bid documents.

Parking

In addition, NASSCO will provide parking for construction workers at the designated equipment and material staging areas in the immediate area of the construction site location.

If parking is temporarily unavailable, NASSCO will require the construction contractor to use high occupancy vehicles to transport construction workers to and from the construction site from the contractor's office(s). This will be added to the construction bid documents.

2.2.6 Project Operation

Except for the proposed west offshore mooring dolphin that would serve the temporary Lot 20 position, all waterside improvements would occur within the existing NASSCO leasehold. The new floating dry dock and associated infrastructure would enable NASSCO employees to continue their existing shipbuilding and repair operations under safe working conditions. The Repair Complex Wharf is sited within the facility which is predominantly allocated to support ship repair operations. The new Repair Complex Wharf size and configuration would allow for the centralization of materials needed to support ship repair within this area as opposed to other areas throughout the facility. This is anticipated to reduce forklift and truck activity within the facility and reduce the amount of time equipment is in transit. In addition, the new temporary Lot 20 position would improve the efficiency of NASSCO's shipbuilding operations and reduce the hours tugboats operate because of the mechanical type of mooring system that would be implemented on the new dry dock. The system minimizes the need for mooring lines, which results in a more efficient relocation when launching newly constructed vessel from the Ways and Building Dock. The project would not result in an expansion of the existing use of the site, an increase in shipbuilding and repair operations, or additional employees beyond those needed during construction.

NASSCO operates under an individual NPDES Permit (Order R9-2016-0116), maintains a facility BMP Plan Manual, and has a fully contained stormwater diversion system where discharging to the receiving water does not occur. NASSCO would be required to maintain all existing operational and maintenance BMPs. Stormwater runoff from the new floating dry dock would be collected, contained, and treated within NASSCO's stormwater diversion system before being released to the San Diego Metropolitan Sewer System. In addition, the floating dry dock would be outfitted with 178,000 gallons of onboard stormwater storage capacity.

All coating systems within the proposed ballast tanks and the exterior hull would be free of copper. The new diesel generators would be U.S. EPA Tier 4-rated and would be outfitted with a closed-loop cooling water system. The new floating dry dock would be outfitted with an extensive electrical distribution system in an effort to reduce the quantity of temporary diesel air compressors utilized for production operations, as well as a modern electric salt water pumping system to minimize the need for portable diesel salt water pumps.

2.2.7 Utilities

The project would require the existing mechanical and electrical utilities to be replaced and reconfigured in order to support the existing demands of dockside operations. The utilities consist of fresh water, salt water, compressed air, compressed gases, and electrical, which are routed from existing distribution systems throughout the project site. Change in demand on municipal systems is not required for the implementation of the project.

2.3 Potential Permits and Approvals Required

The District is the lead agency under CEQA and responsible for permitting and carrying out the proposed project. In addition, several other federal, state, and local permits and approvals will be required for the proposed project. The permits and approvals required for the project are summarized in Table 2-6.

Table 2-6. List of Required Permits and Approvals

Agency	Permit or Approval
U.S. Army Corps of Engineers	• Authorize individual/nationwide Clean Water Act Section 404 Permit (33 U.S. Code Section 1341) • Rivers and Harbors Act Section 10 Permit
California Coastal Commission	• Approval of Coastal Development Permit for project elements outside the U.S. Pierhead Line (i.e., installation of west offshore mooring dolphin and temporary repositioning of floating dry dock in "Lot 20" position during vessel launches from the inclined building ways or building dock) • Right of Entry for construction activities on piers adjacent to U.S. Pierhead Line
San Diego Regional Water Quality Control Board	• Clean Water Act Section 401 Water Quality Certification
San Diego County Air Pollution Control District	• Permits for Diesel Generators
San Diego Unified Port District	• Certification of the Final EIR in compliance with CEQA • Adoption of Mitigation Monitoring and Reporting Program • Adoption of the Findings of Fact • Conditional Project Approval • Authorization of Coastal Development Permit • Real Estate Agreement for west offshore mooring dolphin and dry dock temporary mooring location (Lot 20 position) that would be located outside the U.S. Pierhead Line

2.4 Inconsistencies between the Proposed Project and Applicable General Plans, Specific Plans, and Regional Plans

Pursuant to Section 15125(d) of the State CEQA Guidelines, "an EIR must discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans. Such regional plans include, but are not limited to, the applicable air quality attainment or maintenance plan or State Implementation Plan, area-wide waste treatment and water quality control plans, regional transportation plans, regional housing allocation plans, regional blueprint plans, plans for the reduction of greenhouse gas emissions, habitat conservation plans, natural community conservation plans and regional land use plans for the protection of the Coastal Zone, Lake Tahoe Basin, San Francisco Bay, and Santa Monica Mountains."

As detailed in Chapter 3, *Environmental Analysis*, and Chapter 4, *Cumulative Impacts*, with mitigation measures in place, the proposed project would not result in any inconsistencies with applicable plans, including the California Coastal Act; the District's Port Master Plan (PMP), Climate Action Plan (CAP), Maritime Clean Air Strategy (MCAS), and the joint District-U.S. Navy Integrated Natural

Resources Management Plan (INRMP); the San Diego Water Quality Control Plan (Basin Plan), the San Diego Association of Governments' 2021 Final Regional Plan (Regional Plan); the Portside Communities Emissions Reduction Program (CERP); the State Implementation Plan (SIP); and the Regional Air Quality Strategy (RAQS).[3] Please see Chapter 3, *Environmental Analysis,* and Chapter 4, *Cumulative Impacts,* for a detailed discussion.

2.5 Documents Incorporated by Reference

The proposed project includes in-water construction activities that are subject to the jurisdiction and permitting requirements of regulatory agencies, including the San Diego Regional Water Quality Control Board (RWQCB) and the U.S. Army Corps of Engineers (USACE) (See Table 2-6 for a list of Discretionary Actions). As discussed in Section 3.5, *Hazards and Hazardous Materials*, and Section 3.6, *Hydrology and Water Quality*, the District's approval of the proposed project would be conditioned upon the project obtaining all required permits and approvals and complying with all conditions of approval and mitigation measures required by the resource agencies.

In-water construction activities will occur within the boundaries of the South Site of the Shipyard Sediment Remediation Project (see Figure 3.5-1), which is subject to the regulatory jurisdiction of the RWQCB and the requirements of Clean-up and Abatement Order (CAO) R9-2012-0024. The RWQCB issued the CAO to require the remediation of sediment contamination in certain areas within the project site. The RWQCB also identified mitigation measures to address the potential significant impacts of the CAO's remediation activities in the Final Environmental Impact Report for the Shipyard Sediment Remediation Project (2011) (State Clearinghouse No. 2009111098) and the associated Mitigation Monitoring and Reporting Program (Shipyard MMRP).

Pursuant to CEQA Guidelines Section 15150, the following documents issued, certified and adopted by the RWQCB are incorporated by reference in this EIR: CAO R9-2012-0024; the 2011 Shipyard Final EIR; the Shipyard MMRP; and the Addendum to the Final Program Environmental Impact Report San Diego Shipyard Sediment Remediation Project Related to Changes Identified in the RWQCB Order No. R9-2013-0093, dated July 10, 2013. Copies of these documents are available to the public for inspection in the office of the District Clerk, San Diego Unified Port District, 3165 Pacific Highway, San Diego, CA 92101.

[3] The requirement to discuss inconsistencies with applicable plans is pursuant to State CEQA Guidelines Section 15125(d), which does not require discussion of consistency; see *City of Long Beach v. Los Angeles Unified School District* (2009) 176 Cal.App.4th 889, 918–919; *Banning Ranch Conservancy v. City of Newport Beach* (Dec. 12, 2012) 211 Cal.App.4th 1209; *North Coast Rivers Alliance et al. v. Marin Municipal Water District Board of Directors* (1st Dist., Div. 4, 2013) 216 Cal.App.4th 614 ("The trial court's ruling is tantamount to requiring the EIR to provide a detailed discussion of the Project's consistency with the plan. CEQA includes no such requirement.").

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Chapter 3
Environmental Analysis

Introduction

In accordance with Sections 15126.2 and 15143 of the State CEQA Guidelines, Sections 3.1 through 3.9 of Chapter 3 of this Draft EIR contain a discussion of the potential significant environmental effects that may result from the proposed project, including information related to existing site conditions, criteria for determining the significance of potential environmental impacts, analyses of the type and magnitude of 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 environmental resource and issue areas.

3.1 *Air Quality and Health Risk*

3.2 *Biological Resources*

3.3 *Climate Change, Greenhouse Gas Emissions, and Energy*

3.4 *Geology and Soils*

3.5 *Hazards and Hazardous Materials*

3.6 *Hydrology and Water Quality*

3.7 *Land Use and Planning*

3.8 *Noise and Vibration*

3.9 *Transportation, Circulation, and Parking*

The District determined during preparation of the Initial Study Environmental Checklist (see Appendix C) that the project would have either a less-than-significant impact or no impact associated with the following resources: aesthetics; agriculture and forestry resources; cultural resources; mineral resources; population and housing; public services; recreation; tribal cultural resources; utilities and service systems; and wildfire. In addition, the District determined through the Initial Study Environmental Checklist that the project would have a less-than-significant impact or no impact on certain issue areas within air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, and transportation. Section 5.3, *Effects Not Found to Be Significant*, of this Draft EIR includes a brief analysis of why impacts on these resources would not be significant, as discussed in the Initial Study Environmental Checklist (Appendix C).

Format of the Environmental Analysis

Each of the 9 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 which contain information presented in the environmental analysis, and summarizes the environmental effects of the project 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 when the 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 was published on January 25, 2023. Unless indicated otherwise, the environmental setting described in each of the following sections will be that which existed at the time the NOP was published.

Applicable 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 project as they relate to the particular environmental resource area in discussion. Compliance with laws and regulations is typically mandatory as failure to comply with a law or regulation would be illegal. Therefore, as it relates to the *Project Impact Analysis* below, compliance is assumed because it is required by law, as specified in a tenant lease. Mitigation generally would not be required when the project's compliance with an existing law or regulation would avoid or reduce a significant impact. Although a project's consistency with plans and policies may be expected, it is generally not considered mandatory and therefore it is up to the analysis (described below) to demonstrate that implementation of the project would not result in a physical impact on the environment as a result of an inconsistency with a plan or policy.

Project Impact Analysis

This subsection describes the methodology used for the analysis of the potential environmental impacts of the project; identifies the criteria for determining the significance of potential impacts; discusses the facts, data, and other information that relate 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). 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 issue area questions 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 Discussion

The analysis of environmental impacts considers both the construction and operation of the project. 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 EIR 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 project'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 project 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 project 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 project 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 Discussion* subsection. Mitigation measures are the specific environmental requirements for construction or operation of the project that will be included in the Mitigation Monitoring and Reporting Program and adopted as conditions of approval of the project.

Section 3.1
Air Quality and Health Risk

3.1.1 Overview

This section describes the existing conditions and applicable laws and regulations for air quality and health risk. The section also discusses the proposed project's potential to increase air emissions in the region. Impacts on air quality are considered significant if the proposed project were to (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 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.

As described in Section 3.1.4.3, *Project Impacts and Mitigation Measures*, the proposed project would not result in any significant impacts related to air quality and health risk. No mitigation measures are required.

3.1.2 Existing Conditions

3.1.2.1 Climate and Atmospheric Conditions

Regional

The proposed project is within the San Diego Air Basin (SDAB), which covers all of San Diego County. The SDAB 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 U.S.–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 2018a).

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 2018a).

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 (O_3) levels. In the winter, San Diego often experiences a shallow inversion layer which tends to increase carbon monoxide 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 2018a).

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 South Coast Air Basin and greatly increase the San Diego O_3 concentrations. A strong Santa Ana also primes the vegetation for firestorm conditions (SDAPCD 2018a).

Local

The weather station closest to the project site is the San Diego/Lindbergh Field Station, approximately 3 miles to the northwest. Given its proximity, historic climatic conditions at San Diego/Lindbergh Field over the period of record (1914–2012) are assumed to be representative of the prevailing climatic conditions. The annual average temperature at Lindbergh Field is 63°F, with an average winter temperature of 57°F and an average summer temperature of 69°F (WRCC 2012a). Total annual precipitation averages 10.13 inches. Precipitation occurs mostly during the winter and relatively infrequently during the summer (WRCC 2012b).

The project site is in the vicinity of the Perkins Elementary School wind monitoring station, operated by the San Diego Air Pollution Control District (SDAPCD):, approximately 0.6 mile north-northwest of the project site in the Barrio Logan community. Wind patterns at Perkins Elementary School indicate a prominence of westerly winds that average 4.27 miles per hour (1.91 meters per second), with calm winds present approximately 10.01 percent of the time. (Gould pers. comm.). A wind rose showing wind directions, speeds, and frequency in the project vicinity is shown in Appendix D.

3.1.2.2 Air Quality Conditions

Regional Attainment

The federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) require all areas of California to be classified as attainment, nonattainment, or unclassified with respect to the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). Under the CAA and the CCAA, both the California Air Resources Board (CARB) and U.S. EPA use ambient air quality monitoring data to designate the attainment status of an air basin relative to the CAAQS and NAAQS for each criteria air pollutant. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are "nonattainment," "attainment," and "unclassified." "Unclassified" is used in an area that cannot be classified based on available information as meeting or not meeting the standards. The SDAB is currently classified as a Nonattainment Area with respect to the 1-hour ozone CAAQS and the 8-hour ozone CAAQS and NAAQS (SDAPCD 2020a, 2021; U.S. EPA 2020). Additionally, the SDAB is also classified as a Nonattainment Area with respect to the $PM_{2.5}$ and PM_{10} CAAQS. Attainment designations for the SDAB are shown in Table 3.1-1 for each criteria pollutant.

Table 3.1-1 Ambient Air Quality Standards and Attainment Status for the San Diego Air Basin

Pollutant	Averaging Time	California (CAAQS) a,b	National (NAAQS)c

		Standards	Attainment Status	Standards – Primary b,d	Attainment Status
Ozone (O_3)	1-hour	0.090 ppm (180 µg/m³)	Nonattainment	—	—
	8-hour	0.070 ppm (137 µg/m³)	Nonattainment	0.070 ppm (137 µg/m³)	Nonattainment
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m³)	Attainment	35 ppm (40 mg/m³)	Attainment
	8-hour	9 ppmf (10 mg/m³)	Attainment	9 ppm (10 mg/m³)	Attainment
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m³)	Attainment	53 ppb (100 µg/m³)	Attainment
	1-hour	0.18 ppm (339 µg/m³)	Attainment	100 ppb (188 µg/m³)	Attainment
Sulfur dioxide (SO_2)	24-hour	0.04 ppm (105 µg/m³)	Attainment	—	—
	3-hour	—	Attainment	—	—
	1-hour	0.25 ppm (655 µg/m³)	Attainment	75 ppb (196 µg/m³)	Attainment
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m³	Attainment	—	—
	24-hour	50 µg/m³	Nonattainment	150 µg/m³	Unclassified/ Attainment
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m³	Nonattainment	12 µg/m³	Unclassified/ Attainment
	24-hour	—	—	35 µg/m³	Unclassified/ Attainment
Lead [e]	Calendar quarter	—	—	1.5 µg/m³	Attainment
	30-Day average	1.5 µg/m³	Attainment	—	—
	Rolling 3-Month Average	—	—	0.15 µg/m³	Attainment
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m³)	Unclassified	No national standards	
Sulfates	24-hour	25 µg/m³	Attainment		
Vinyl chloride [e]	24-hour	0.01 ppm (26 µg/m³)	Unclassified		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km	Unclassified		

Notes: µg/m³ = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million (by volume).

[a] California standards for ozone, carbon monoxide, SO_2 (1- and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most

measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[c] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[d] National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[e] The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. This allows for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: U.S. EPA 2020; SDAPCD 2020a; and SDAPCD 2021a.

Local Criteria Pollutant Concentrations

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 the pollutants and determine whether the ambient air quality meets the CAAQS and NAAQS. The ambient monitoring station closest to the proposed project is the San Diego–Sherman Elementary station (CARB 80147), approximately 1.2 mile to the north. Ozone and $PM_{2.5}$ are monitored are the San Diego–Sherman Elementary station. This station opened in July 2019, and replaced the San Diego–Beardsley Street station, which closed in November 2016. The closest station that monitors PM_{10} is the Chula Vista station (CARB 80114), approximately 7 miles southeast of the project site.

Concentrations of pollutants from the San Diego–Sherman Elementary and Chula Vista stations over the most recent 3-year period (2019–2021) of complete data are presented in Table 3.1-2. Monitoring has shown the following pollutant concentrations trends: the 8-hour O_3 CAAQS was exceeded once in 2019 and three times in 2020; 24-hour PM_{10} CAAQS was exceeded once in 2019; and 24hour $PM_{2.5}$ NAAQS was exceeded twice in 2019. As discussed further below, the CAAQS and NAAQS define clean air and represent reasonable standards below which ambient air quality will not result in adverse health impacts. Existing violations of the O_3, PM_{10}, and $PM_{2.5}$ ambient air quality standards indicate that certain individuals exposed to this pollutant may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

Table 3.1-2 Summary of Annual Data on Ambient Air Quality (2019-2021)

Pollutant	2019	2020	2021
Ozone – Sherman Elementary School			
Maximum concentration (1-hr/8-hr avg, ppm)	0.08/0.07	0.12/0.09	0.08/0.06
Number of days State standard exceeded (1-hr/8-hr)	0/0	2/0	0/0
Number of days national standard exceeded (8-hr)	1	3	0
Fine Particulate Matter ($PM_{2.5}$) – Sherman Elementary School			
Maximum concentration (24-hour µg/m^3)	-	51.9	25.6
Average concentration (annual µg/m^3)	-	10.7	9.7
Number of days national standard exceeded (24-hour measured)	-	2	0
Fine Particulate Matter (PM_{10}) – Chula Vista			
Maximum concentration (µg/m^3)	68	68	46

Pollutant	2019	2020	2021
Number of days State standard exceeded	1	0	0
Number of days national standard exceeded (estimated days)	-	-	-

Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million; - = data not available

Source: SDAPCD 2022a, CARB 2023

3.1.2.3 Pollutants of Concern

Criteria Pollutants

The federal and state governments have established NAAQS and CAAQS, respectively, for six criteria pollutants: O_3, CO, lead (Pb), NO_2, sulfur dioxide (SO_2), and PM, which consists of PM_{10} and $PM_{2.5}$. Ozone is considered a regional pollutant because its precursors affect air quality on a regional scale. Pollutants such as CO, NO_2, SO_2, 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 O_3 precursors (regional organic gases [ROG] and nitrogen oxides [NO_X]), CO, and PM.[1]

All criteria pollutants can have human health and environmental effects at certain concentrations. The ambient air quality standards for these pollutants (Table 3.1-5) 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 ROG and NO_X (both by-products of the internal combustion engine) react with sunlight. ROG 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 ROG 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 O_3 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 outdoors. Exposure to O_3 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 O_3 exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to O_3 may increase the risk of respiratory-related deaths (EPA 2019a).

[1] As discussed, there are also ambient air quality standards for SO_2, Pb, sulfates, hydrogen sulfide, vinyl chloride, and visibility particulates. However, these pollutants are typically associated with large stationary sources (such as manufacturing), which are not included as part of the project.

The concentration of O_3at 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 O_3 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 O_3 concentration reaches 80 ppb (EPA 2019b).

In addition to human health effect, O_3 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.

- **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 3.1-5) can also cause fatigue, headaches, confusion, dizziness, and chest pain. Ambient CO has no ecological or environmental effects (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 PM_{10}, 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, SO_2, ammonia, and ROGs.

  Particulate pollution can be transported over long distances and may adversely affect people, especially those 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 lunch function, and increased respiratory symptoms. Exposure to concentrations of PM above the current ambient air quality standards may result in these health effects (CARB 2019c). Similar to ozone, 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 2019c). The CAAQS and NAAQS for PM are shown in Table 3.1-5.

  Depending on its composition, both PM_{10} 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 2019d).

- **Nitrogen dioxide** is formed by the combination of NO and oxygen through internal combustion. Long-term exposure to NO_2 can aggregative 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 part per million NO_2. 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 NO_2 is 0.18 ppm (see Table 3.1-5). In addition to human health effects, NO_2 can also reduce visibility and react with water, oxygen, and other chemicals to contribute to acid rain, which can harm sensitive ecosystems (EPA 2019c).
- **Sulfur dioxide** is a product of fuel combustion. The predominant source of SO_2 emissions within the County is mobile source fuel combustion, primarily aircraft, ocean going vessels, and on-road vehicles. In recent years emissions of SO_2 have been significantly reduced by the increasingly stringent controls placed on the sulfur content of fuels used in stationary sources and mobile sources. SO_2 is a precursor to fine PM formation in the form of sulfates, such as ammonium sulfate. Short-term exposure to SO_2 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 SO_2 level of 0.4 part per million can result in increases in air resistance. Healthy adults do not show any symptoms to SO_2 at levels as high as 1 part per million (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 SO_2 (see Table 3.1-5) (SCAQMD 2017). In addition to public health impacts, SO_2 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 heat disease, decreased immunity and red blood cell counts, and reproductive and developmental effects (CARB 2019b).

Health Effects of Criteria 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 particulate matter, NO_2, and SO_2 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 3.1-3.

Table 3.1-3 Health Effects Summary of the Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Ozone (O_3)	• Atmospheric reaction of organic gases with NO_2 in sunlight	• Aggravation of respiratory and cardiovascular diseases • Irritation of eyes • Impairment of cardiopulmonary function • Plant leaf injury
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust • High temperature stationary combustion • Atmospheric reactions	• Aggravation of respiratory illness • Reduced visibility • Reduced plant growth • Formation of acid rain
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon containing substances, such as motor exhaust • Natural events, such as decomposition of organic matter	• 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 ($PM_{2.5}$ and PM_{10})	• Stationary combustion of solid fuels • Construction activities • Industrial processes • Atmospheric chemical reactions	• 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)	• Combustion of sulfur-containing fossil fuels • Smelting of sulfur-bearing metal ores • Industrial processes	• 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)	• Contaminated soil	• Impairment of blood function and nerve construction • Behavioral and hearing problems in children

Source: SCAQMD 2007

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). DPM 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. The diesel emissions that are generated within the Barrio Logan

community and surrounding areas including the adjacent freeways have been previously documented as posing potential hazard to residents and visitors (City of San Diego 2013).

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.

3.1.2.4 Existing Emissions and Ambient Health Risks

Regional 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 cancer 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 PM_{10} data and the results from several studies on chemical speciation of ambient data (e.g., ratio of DPM to monitored PM_{10}).

Local Health Risk

More recently, the State released 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 the project site represent some of the highest rankings (e.g., higher relative pollution burden) in the state.

The area near the project site (collectively known in the Community Air Protection Program as the *Portside Environmental Justice Neighborhoods*)[2] includes several census tracts with high (poor) ratings as part of the CalEnviroScreen, including four census tracts that are in the 98th percentile in the state and another eight that are in the 85th percentile. The project site is within census tract 6073005000, which is within the 98th percentile in the state. Over 50,000 residents live in the *Portside Environmental Justice Neighborhoods* and are subject to pollution exposure (SDAPCD 2018b). The Portside Environmental Justice Neighborhoods, along with other areas selected for monitoring throughout the state, will see additional new actions through potential regulations,

[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.

focused incentive investments, enforceable agreements, and engagement with local land use authorities to reduce emissions and exposure to air pollution.

Criteria Pollutant Inventory for the Project Site

NASSCO is required by CARB to report criteria pollutant emissions from activities per the Air Toxics "Hot Spots" Program at least every 4 years (SDAPCD 2021a). A summary of criteria pollutant reporting for the previous two reporting timeframes is provided in Table 3.1-4. Activity at NASSCO ship repair yard that generates emissions includes exhaust associated with equipment used within the NASSCO leasehold (e.g., generators, compressors, and cranes) as well as process-related emissions from welding, painting, blasting, and any other activities related to ship repair. Overall, the Air Toxics "Hot Spots" Program has dramatically reduced emissions both locally and across the state, with the most significant reductions due to the use of "green" solvents and improved equipment controls of heavy metal emissions (SDAPCD2021a).

Table 3.1-4 NASSCO Criteria Pollutant Emissions Reporting (tons per year)

Year	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
2020	65.1	10.3	3.7	8.1	5.1	<0.0
2019	127.2	9.8	3.3	11.6	8.6	<0.0
2018	105.6	8.5	2.3	13.1	9.1	<0.0
2017	105.6	8.5	2.3	13.1	9.1	<0.0
2016	105.6	8.5	2.3	13.1	9.1	<0.0

Source: CARB 2021a.

ROG = reactive organic gas; NO_X = nitrogen oxide; CO = carbon monoxide; PM_{10} and $PM_{2.5}$ = particulate matter less than or equal to 10 and 2.5 microns in diameter, respectively; SO_X = sulfur oxide

Toxic Air Contaminant Inventory for the Project Site

NASSCO is required by CARB to report TACs per the Air Toxics "Hot Spots" Program at least every 4 years (SDAPCD 2021a). Processes at the NASSCO site that generate TACs include blasting of coated and uncoated surfaces, welding, painting and solvent use, and fuel combustion. A summary of TACs for recent years is provided in Table 3.1-5.

NASSCO has implemented various strategies to reduce emissions and associated health risk. Measures to date include the following:

- Widespread use of zero emission cranes in production operations with more than 90% of the shipyard cranes powered by electricity.
- Installed particulate filters and EPA certified engines on nine diesel-powered portal cranes.
- Installed selective catalytic reduction on six diesel-powered portal cranes.
- Eliminated a stationary diesel-powered compressor and replaced it with an electric compressor.
- Implemented requirements that contractors use only zero or near-zero emission portable compressors when working in the shipyard.
- Prohibited stainless steel welding using shielded metal arc-welding (SMAW) consumables.

NASSCO has also implemented a number of strategies to reduce other chemical emissions and risks from the facility, including the use of EPA recognized best management practices such as process or product modifications and the addition of filters to reduce emissions from welding. Additionally, NASSCO added a fully enclosed 66,000 square foot blast and paint facility equipped with advanced filtration systems to address particulate and painting emissions. These risk reduction measures have significantly reduced chemical emissions from the facility (SDAPCD 2023a).

Table 3.1-5 NASSCO Toxic Air Contaminant Emissions Reporting (pounds per year)

Pollutant	2020	2019	2015-2018	Pollutant	2020	2019	2015-2018
1,2,4TriMeBenze	15,938	30,823	13,073	Hexane	0	0	10
1,3-Butadiene	87	72	75	Isopropyl Alcohol	3,365	671	126
2,2,4TriMePentn	314	260	1	Lead	9,922	3	5
Acetaldehyde	14	11	271	MEK	693	13,323	379
Acrolein	0	0	12	Manganese	725	25,643	103
Aluminum	317	591	505	Mercury	74	0	1
Arsenic	1	1	1	Methanol	4	575	767
Barium	69	136	29	Naphthalene	11	1,972	7
Benzene	74	62	64	Nickel	57	62	100
Cadmium	2	8	3	PAHs-w/	3	10	12
Chlorobenzn	0	3	0	PGME	180	82	8,336
Chlorobenzns	0	0	0	Propylene	80	3	161
Chromium	12	7	43	Selenium	61	109	1
Cobalt	0	0	0	Silica, Crystln	1	26	9
Copper	88	213	137	Toluene	91	63	468
Cr(VI)	1	0	1	Xylenes	28	1	26,047
DieselExhPM	72	403	1,122	Zinc	8	100	288
Ethyl Benzene	10	14	9,898	[D] Acetone	8	18	617
Formaldehyde	235	0	598	n-Butyl Alcohol	94	7	39,100
Glycol Ethers	0	0	720	t-BuAcet:TBAc	14	79	0
HCl	1,247	0	64				

Source: CARB 2021a.

3.1.2.5 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, the elderly older than 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as *sensitive receptors* (CARB 2005). 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 2005).

The project is located in a primarily industrial area that borders San Diego Bay to the west, the communities of Logan Heights and Barrio Logan to the north and northeast, and Cesar Chavez and Chicano Parks to the northwest. The nearest sensitive receptors within the City of San Diego include residents in the Barrio Logan community, just across Harbor Drive and the BNSF rail line north of the project site. The closest residence is located on the north side of Main Street just west of South 27th Street, approximately 1,180 feet north of the nearest project site boundary. The nearest school, the Logan Memorial Educational Campus, bordered on the south by Logan Avenue between South 28th and South 29th Streets, is located approximately 3,010 feet north of the project site. The nearest residential areas in the City of Coronado are located across San Diego Bay, approximately 1.4 miles west of the project site and are not discussed further due to their distance from the site.

3.1.3 Applicable Laws, Regulations, Plans, and Policies

The air quality management agencies of direct importance to the proposed project 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 describes regulations applicable to the proposed project.

3.1.3.1 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 would most substantially affect the development of the proposed project include 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 3.1-6 shows the NAAQS currently in effect for each criteria pollutant. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and adopt a standard for $PM_{2.5}$. The 8-hour O_3 NAAQS was further amended in October 2015.

Table 3.1-6 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS[1]	NAAQS[2]
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

Pollutant	Averaging Time	CAAQS[1]	NAAQS[2]
	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 2016.

1 The California Ambient Air Quality Standards (CAAQS) for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, 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 National Ambient Air Quality Standards (NAAQS), other than O_3 and those based on annual averages, are not to be exceeded more than once a year. The O_3 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 PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, is equal to or less than the standard.

ppm = parts per million by volume; ppb = parts per billion; µg/m^3 = micrograms per cubic meter.

3.1.3.2 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 3.1-6 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

California regulates TACs primarily through the Tanner Air Toxics Act (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).

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 . The AB 617 Steering Committee includes local stakeholders, technical and scientific experts, and members of local industry. In December 2019, CARB selected the Portside Community[3] 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

[3] 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.

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 2021b). See a more detailed discussion of the CERP for the Portside communities under Section 3.1.3.3, "Regional," below.

3.1.3.3 Regional

San Diego Unified Port District Plans and Programs

The 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 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 provides a framework for the District's commitment to reducing air emissions, through which control measures have been implemented to reduce air emissions, building upon regulatory and voluntary efforts.

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 and 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 seeks opportunities to advance lower emitting solutions for marine vessels and OGVs (expand vessel speed reduction and shore power).

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. 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, and 2009, and in 2016. The 2022 RAQS is currently in draft form and is expected to be approved by the SDAPCD board on March 9, 2023 (SDAPCD 2023b).

The RAQS does not directly address the state air quality standards for PM_{10} or $PM_{2.5}$, although some RAQS strategies indirectly result in benefits to PM_{10} and $PM_{2.5}$. 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 2016 Eight-Hour O_3 Attainment Plan (2016 SIP) addresses the requirements for attaining the 2008 8-hour O_3 NAAQS. The 2020 Plan for Attaining the National Ozone Standards (2020 SIP) addresses the requirements for attaining the 2008 and 2015 8-hour O_3 NAAQS. Both the RAQS and SIP 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 O_3 NAAQS. The SIP is also updated on a triennial basis. SDAPCD adopted its attainment plan and Reasonable Available Control Technology Demonstration for the 2008 8-hour O_3 NAAQS. In addition, the *Measures to Reduce Particulate Matter in San Diego County* report (SDAPCD 2005) proposes measures to reduce PM emissions and recommends measures for further detailed evaluation and, if appropriate, future rule development (or non-regulatory development, if applicable), adoption, and implementation in San Diego County, in order to attain PM CAAQS.

Air Toxics "Hot Spots" Program

The SDAPCD implements CARB's Air Toxics "Hot Spots" Program locally. The program requires facilities emitting toxic substances to quantify emissions, identify impacted areas, notify individuals exposed to elevated risks, and then develop and implement strategies to reduce potential significant risks. SDAPCD produces an annual report, which summarizes the latest results regarding emission estimates, the results of local Health Risk Assessments (HRAs), and the current status of public notifications and risk reduction requirements. The latest report is for the years 2019 and 2020 (SDAPCD 2021a). Approximately 3,000 facilities within the county are required to comply with the program, including NASSCO.

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. The proposed project 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 in Regulation 8 as sources that emit 100 tons per year of PM_{10}, SO_X, CO, and lead; and 50 tons per year of NO_X and volatile organic compounds (VOC) in federal O_3 nonattainment areas.

- **Rule 50—Visible Emissions:** establishes limits for the opacity of emissions within the SDAPCD. The proposed project 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.
- **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.
- **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.

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 2021b).

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 approved by CARB's governing board in October 2021 (CARB 2021b).

3.1.4 Project Impact Analysis

3.1.4.1 Methodology

Air quality impacts associated with construction and operation of the proposed project were assessed and quantified using industry standard and accepted software tools, techniques, and emission factors. A description of the methodology is provided below. Emission estimates are based on project details, including construction schedule and equipment and truck activity assumptions, provided by the project applicant, The methodology used to estimate air pollutant emissions discussed below is the same that was used to estimate GHG emissions, as described in Section 4.3, *Greenhouse Gas Emissions and Energy*.

Construction Emissions

Construction of the proposed project would generate emissions of ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ that could result in short-term impacts on ambient air quality in the study area. Emissions would originate from construction of landside and waterside components. Sources of emissions associated with landside activities include off-road equipment exhaust, employee vehicle exhaust, and haul truck and material delivery exhaust. Sources of emissions associated with waterside activities include diesel pile drivers and exhaust from tugboats and barges that will be used to store and move equipment, materials, and personnel around the project site.

The methods used to estimate emissions from construction of the proposed project are described below.

Off-Road Equipment: Construction equipment (e.g., excavators, cranes) would be used for construction of structures and installation of piles. Specific equipment types, horsepower rating, and daily usage for each phase of construction were provided by the project applicant. Emissions from equipment were estimated using off-road equipment emission factors and emission formulas from the CalEEMod (version 2022.1) User's Guide for the project's equipment types, horsepower rating, and hours per day provided by the project applicant. It was assumed that no electrically powered equipment would be used in the construction of the proposed project. All off-road equipment would be diesel-powered.

On-Road Vehicles: On-road vehicles (e.g., pickup trucks, flatbed trucks, passenger cars) would be required for material and equipment hauling, onsite crew and material movement, employee commuting, and material disposal. Combustion exhaust, paved road and brake and tire wear fugitive dust (PM_{10} and $PM_{2.5}$), and fugitive off-gassing (ROG) were estimated using a combination of emission factors and methodologies from CalEEMod and emission factors from CARB's EMFAC 2021 model based on the number of truck trips by trip type (e.g., employee commuting, material hauling) provided by the project applicant.

Emissions from haul and delivery trucks were estimated using Heavy-Heavy Duty Truck (HHDT) emission factors from EMFAC 2021, a CalEEMod default of 20 miles for each one-way trip, and the amount of trucks trips for each phase of construction provided by the project applicant. Emissions from trucks operating only on the project site were estimated using HHDT emission factors from EMFAC 2021 assuming a single truck travels 5 miles per hour on-site for 2 hours per day.

Emissions associated with the construction worker commute travel were estimated based on a weighted average of light duty auto (LDA), light duty truck 1 (LDT1), and light duty truck 2 (LDT2) emission rates from EMFAC 2021 web tool, similar to the vehicle split used in CalEEMod (e.g., LDA = 25

percent, LDT1 = 50 percent, LDT2 = 25 percent), a CalEEMod default trip length for of 11.97 miles per trip, assuming 10 workers per day for each phase of construction, and three trips per worker per day.

Harbor Craft: Harbor craft would be used to store and move equipment, materials, and personnel around the project site and to move the barges into place. Specific equipment types, horsepower rating, and daily usage for each phase of waterside construction were provided by the project applicant. Emissions were estimated using CARB's most recent harbor craft emissions inventory (CARB 2022) for diesel equipment assuming the barge engines each operate 8 hours per day and the tugboat operates one hour per day to move the barges around the project site. Emissions for the pushboat were estimated using CARB's offroad database assuming the pushboat is powered by a 50-horsepower gasoline outboard engine.

It was assumed that harbor craft would operate 40 days per year for first three phases of construction (Floating Dry Dock Replacement and Modification, and Repair Complex Wharf Improvements, Quay Wall Revetment Repairs (Berths 2-5)), 38 total days for As-needed Quay Wall Revetment Repairs (38 days over 3 years), and 25 days per year for the Structural Pile Repair and Replacement (25 days per year for 10 years). Additionally, it was assumed there would be a single workday to transport the tug and barges to the project site and another day to transport the tug and barges from the project site to the equipment's home base for each phase. During these mobilization and demobilization phases, there would two hours of tug usage.

Welding: During construction, minor spot welding of mild steel may occur, and would be limited to two specific locations within the construction area. Based on information from the project applicant, it was assumed that there could be an estimated 75 pounds of Shielded Metal Arc Welding (SMAW) welding over the course of a year. Emissions are based on 75 pounds of welding rods across two sites and SDAPCD published default emission factors for SMAW-type welding (SDAPCD 2022b).

Construction-related emissions were assessed for each phase of project construction, with daily emissions from overlapping phases summed, to calculate conservative maximum daily emissions. Each phase of construction was modeled separately. The modeling is based on the construction schedule described in Chapter 2, Section 2.2.5.1, *Construction Schedule*.

Note that the anticipated construction schedule assumed in this modeling is approximate and is provided for analysis purposes, and the actual start and end dates may vary. While overall construction timing may vary and may occur later than assumed here, it is assumed the sequence of phases relative to other phases and activities would not change. If the schedule is delayed, then concurrent elements would still occur concurrently (i.e., phase overlaps would be the same, albeit at a later date).

Operational Emissions

As discussed in Chapter 2, Section 2.2.6, *Project Operation*, the proposed project would not change the nature or extent of existing operations at the project site. The proposed project would not expand operations or result in additional employment or vehicle trips compared to existing conditions. The new floating dry dock and associated infrastructure would enable NASSCO employees to continue their existing shipbuilding and repair operations under safe working conditions. In addition, the new temporary Lot 20 position for the floating dry dock would improve the efficiency of NASSCO's shipbuilding operations and reduce the hours tugboats operate because of the more efficient operating conditions associated with use of the Lot 20 location and easier positioning during vessel launches. The project would not result in an expansion of the existing use of the site, an increase in shipbuilding and repair operations, or additional employees beyond those needed during

construction. Because long-term operational changes are minimal, operational emissions are discussed quantitatively.

Health Risk Assessment

Construction of the proposed project would emit TACs that could affect public health in neighboring communities. The sources of TACs from construction include offroad construction equipment and harbor craft operating within the project area, heavy duty trucks operating within the project area and on public roadways, and welding that would occur within the project area. For health effects resulting from long-term exposure to diesel exhaust, CARB and OEHHA consider DPM as representative of the total health risks associated with the combustion of diesel fuel. For health effects resulting from welding, this analysis relies on TAC emission factors from SDAPCD. An HRA was prepared for this project to provide an estimate of potential cancer risk to nearby receptors due to construction emissions. This HRA was performed in accordance with OEHHA's Air Toxic Hot Spot Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2015) and SDAPCD's Supplemental Guidelines for Submission of Rule 1200 Health Risk Assessments (SDAPCD 2022).

The HRA consists of three distinct steps: (1) TAC emissions inventory, (2) air dispersion modeling to evaluate off-site concentrations of DPM emissions, and (3) assessment of risks associated with predicted concentrations. A description of each of these steps is provided below.

All dispersion modeling and risk calculation inputs and outputs are provided in Appendix D.

TAC Emissions Inventory

The emissions inventory includes an inventory of DPM emissions from diesel-powered equipment and TAC emission from construction welding activities.

DPM Emissions

DPM emissions would be associated with diesel-powered heavy-duty equipment, harbor craft, and vehicle exhaust emitted within and near the project site. PM_{10} exhaust emissions are used as a surrogate for DPM based on OEHHA guidance. While DPM is a complex mixture of gases and fine particles that includes more than 40 substances listed by USEPA and CARB as HAPs, OEHHA guidance indicates that the cancer potency factor developed to evaluate cancer risks was based on total (gas and PM) diesel exhaust (OEHHA 2001).

Emissions of PM_{10} exhaust were estimated using emission factors from CalEEMod and anticipated equipment, harbor craft, and truck activity provided by the project applicant. The methodology describing the calculation of PM_{10} exhaust emissions is provided above under the construction emissions methodology. For this HRA, it was assumed that all equipment and harbor craft PM_{10} emissions would occur within the project area. The resulting PM_{10} emissions were summed and averaged over the specific timeframes during the entire construction period to determine the DPM emission rate during time scales that align with OEHHA age bins.

It was assumed that PM_{10} exhaust emission from harbor craft and construction equipment would occur within the project site. Thus, all PM_{10} emissions modeled in the construction emissions analysis are included in this HRA. In the mass emissions analysis, trucks were assumed to travel 20 miles per one-way trip. However, the HRA is only concerned with those emissions that could potentially impact the community. Therefore, truck emissions in the HRA account for truck travel along surface streets and the

freeway within one mile of the project site, assuming all trucks arrive to and depart the project via Harbor Drive, 28th Street, and Interstate 5.

Welding TAC Emissions

Welding TAC emissions would be emitted during minor spot welding of mild steel, which is assumed to be limited to two specific locations within the construction area. Based on the SDAPCD published default emission factors for SMAW-type welding (SDAPCD 2022b), welding TACs include cobalt, chromium, hexavalent chromium, manganese, and nickel. Welding TAC emissions were estimated for each of the two locations based on the assumption that there would be 75 pounds of SMAW-type welding at two distinct locations within the project area over a single year.

A summary of the total and maximum hourly TAC emission estimates is provided in Appendix D.

Dispersion Modeling

Dispersion modeling was conducted with the CARB-approved American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee modeling system (AERMOD), Version 21112 (EPA 2021). Dispersion modeling was conducted in AERMOD to estimate ground-level TAC concentrations at each receptor location. This approach enabled the output files to be assigned appropriate emission rates and to estimate DPM (PM_{10} exhaust) concentrations, as well as resulting cancer and non-cancer risk levels, at each receptor location. Residential, school, and park receptor locations were modeled. The health risk at each individual sensitive receptor location was estimated in the Hotspots Analysis and Reporting Program Version 2 (HARP2) (CARB 2019).

The modeling included all standard regulatory default options, including the use of urban dispersion parameters and local terrain. The following specific parameters were used to perform airborne dispersion modeling and the assessment of health risks related to DPM and welding TAC emissions resulting from project construction, including general AERMOD configuration, meteorological data inputs, and selection of emission sources and receptors.

Meteorological Data

To run AERMOD, the following hourly surface meteorological data are required: wind speed, wind direction, ambient temperature, and opaque cloud cover. In addition to surface data, upper air sounding data is required. The upper air sounding data provides information on the vertical structure of the atmosphere beyond the effective range of surface weather. These meteorological variables were used to estimate air dispersion of pollutants in the atmosphere. Wind speed determines how rapidly pollutants are transported away from the source, while wind direction determines where pollutants are transported. The difference in ambient temperature and the exhaust temperature determines the initial buoyancy of emissions from point sources. The opaque cloud cover, upper air sounding data, surface roughness, the Bowen ratio (ratio of sensible to latent heat flux), and albedo (reflectiveness of the earth's surface back to space without absorption) are all used in determining other dispersion parameters using similarity theory to develop profiles of the boundary layer parameters and determine the rate of turbulent mixing. These parameters include atmospheric stability (a measure of atmospheric turbulence that determines the rate at which pollutants are mixed laterally and vertically), the aloft vertical temperature gradient, and the convective and mechanical boundary layer height (the vertical depth through which pollutants may be dispersed).

Meteorological data for the dispersion modeling was based on data from the SDAPCD for the Perkins Elementary School (SDAPCD 2021a) for the complete 3-year period of 2010 through 2012. This data was processed with turbulence data (sigma-theta data). Perkins Elementary School is approximately one mile north/northwest of the project site and is the nearest and most representative meteorological station to the proposed project site. A wind rose displaying the wind speed and wind direction is shown in Appendix D. The wind primarily blows from the west towards the northeast during most of the year. Using these data, dispersion modeling applied a time-averaged, simplified representation of turbulent, atmospheric transport to approximate how pollutants are carried, mixed, dispersed, and diluted by the local winds.

Receptor Grid

A receptor grid with 50-meter spacing was placed in the areas surrounding the proposed project site per SDAPCD HRA guidelines, extending out to approximately 1,500 meters (1 mile) beyond the project site boundary. The receptor grid was placed to estimate the level of cancer risk and to determine whether residents, children at schools, and recreational users at parks would be exposed to excessive concentrations of DPM. All receptors in the analysis used a 0-meter receptor height (i.e., ground level).

Sources Parameters

Separated groups of adjacent volume sources placed within the proposed project site to represent off-road equipment and tugboats/barges used during construction. Additionally, welding would occur at two distinct locations within the project area. A description of the parameters for each source is provided below. The elevations of volume sources and receptors were based on terrain-feature data obtained from CARB's Digital Elevation Model Files (CARB 2022).

- Construction equipment sources were represented as adjacent volumes, strung along the landside area of the construction area, each with a 20-meter diameter, a release height of 5 meters, initial lateral dimension of 4.65 meters, and an initial vertical dimension of 1 meter. Model parameters are consistent with the representation of cargo handling equipment in the District's recent document, *Health Risk Assessment: Focusing on Diesel Particulate Matter at the District's Marine Cargo Terminals* (District 2022). Construction equipment sources were placed along the landside portion of the project construction area. This represents the area where equipment would be active. No emission sources were placed in portions of the leasehold where there would be no activity.
- Harbor craft sources (tugs and barges) were represented as adjacent volumes, strung along the waterside area of the construction area, each with a 40-meter diameter, a release height of 5 meters, an initial lateral dimension of 9.3 meters, and an initial vertical dimension of 2.33 meters. Model parameters are consistent with the representation of tugboats in the District's recent HRA for the cargo terminals (District 2022). Construction Harbor craft sources were placed along the waterside portion of the project construction area. This represents the area where harbor craft would be active. No emission sources were placed in portions of the leasehold where there would be no activity.
- Trucks used to carry materials and debris on surface streets and freeways were modeled separately to account for the increased width of the freeway. Surface street travel was represented as a line of adjacent volume sources, with a 6.8-meter plume height, 9.3-meter plume width, and a 3.4-meter release height. Freeway travel was represented as a line of adjacent volume sources, with a the same 6.8-meter plume height and 3.4-meter release height,

but a 9.3-meter plume width to account for the extra lanes of travel. Model parameters are consistent with the representation of truck travel in the District's recent HRA for the cargo terminals (District 2022).

- Welding sources were represented as adjacent volumes, strung within the two areas where spot welding could occur, each with a 25-meter diameter, a release height of 1 meter, an initial lateral dimension of 5.81 meters and an initial vertical dimension of 0.93 meters. Model parameters are consistent with the representation of welding sources within the SDAPCD's most recent HRA for the NASSCO facility (SDAPCD 2020b).

Terrain and Dispersion Coefficient

The dispersion modeling analysis also included terrain data to accurately assess impacts in three dimensions. The terrain data used for the analysis consisted of the United States Geological Survey's (USGS) National Elevation Dataset (NED) data, which was downloaded in AERMOD for the project area.

The urban dispersion coefficient was selected in AERMOD based on the characteristics of land uses within the project area and surrounding area, which is a mix of high density of industrial and urban uses. These land uses typically have lower vegetation and higher hardscape (asphalt or concrete) conditions compared to rural areas. The urban dispersion coefficient accounts for the effects of increased nighttime surface heating from an urban area on pollutant dispersion under stable atmospheric conditions. The nighttime surface heating is due to the urban heat island effect, in which structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more so than natural landscapes such as forest or agricultural lands. In other words, even at nighttime, urban surfaces continue to release heat, resulting in some mixing compared to rural areas. This effect is dependent on a number of factors but has been parameterized in AERMOD as a function of urban population and the surface friction velocity. When selecting the urban dispersion option, AERMOD requires the input of population data. The population was set at 3 million to represent the approximate population of the San Diego region.

The use of the urban dispersion coefficient is consistent with SDAPCD's modeling for the NASSCO facility as part of its the Air Toxics "Hot Spots" Program (SDAPCD 2020b) and the HRA for the cargo terminals (District 2022) as well as previous modeling exercises performed by CARB for the BNSF San Diego Railyard (CARB 2008).

Averaging Time and Unitized Emission Rate

The PERIOD averaging time was used tin AERMOD to estimate annual average concentrations. The PERIOD averaging time refers to the average for the entire meteorological data period rather than a single year of meteorological data. The meteorological data used in AERMOD included three years of data from 2010 to 2012, and the average annual concentrations are based on the average over these three years. To estimate the acute effects of welding TACs, AERMOD was also run for 1-hour and 8-hour average times to account for those TACs with acute health factors, Each source in AERMOD was modeled using a unitized emission rate, or 1 gram per second (g/s), to estimate ground level concentrations (GLCs) in micrograms per cubic meter ($\mu g/m^3$) at each receptor. Since a unitized emission rate is used for all sources, the output concentrations from AERMOD can be used as dispersion factors (or scaling factors). The dispersion factor represents the AERMOD output concentration based on an emission rate of 1 g/s. The dispersion factor is then multiplied by the actual emission rate for each source to estimate GLCs at each receptor. These GLCs are then used to estimate cancer and non-cancer health effects, which are described in the following section.

Risk Assessment

Consistent with USEPA, CARB, and air district regulatory guidance, the HRA examines cancer, noncancer (chronic), and noncancer (acute) exposure to the surrounding community and uses OEHHA's guidance on risk calculations (OEHHA 2015).

Health risk calculations were conducted in accordance with guidance from the SDAPCD's *Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments* and the Office of Environmental Health Hazard Assessment's (OEHHA*) Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments* (OEHHA Guidelines) (SDAPCD 2022c, OEHHA 2015).

Estimation of health risks has three components: 1) Exposure Assessment, 2) Dose-Response Assessment, and 3) Risk Characterization. Each of these components is described in further detail below.

Exposure Assessment

Pathways

Exposure to TACs can occur through various exposure pathways, which include inhalation and non-inhalation pathways (e.g., soil ingestion, mother's milk ingestion, homegrown produce ingestion). For DPM, only the inhalation pathway is evaluated. For welding TACs, "Mandatory Minimum Pathways" option in HARP was selected, which activates all other relevant pathways in HARP, including but not limited to soil, dermal, and mother's milk pathways, in addition to inhalation. Dermal climate was set to warm and deposition rate was set to 0.05 m/s.

Scenarios

This HRA estimated cancer risk, chronic (non-cancer), and acute (non-cancer) risk at sensitive receptors locations including residents, children at schools, and children at parks. For residential receptors, the approach estimated the maximum 30-year cancer risk at an individual residential location. For parks, exposure factors for children were selected since they are health-protective by accounting for increased sensitivity to carcinogens during early-in-life exposure. Although patrons of parks could include the elderly or other individuals sensitive to toxic exposures, using exposure factors for children would result in the most conservative analysis for any park patron.

Health risk impacts were evaluated for residences, children at schools, and children at parks within a quarter of a mile of the project area. In accordance with OEHHA guidelines, residential cancer risk was based on a 30-year exposure duration, beginning in the third trimester of pregnancy. For children at schools, an exposure duration of 12 years beginning at age 2 was assumed for children at school. For children at parks, an exposure duration of 9 years, beginning at birth, was assumed for children at parks.

Chronic (non-cancer) risks were based on exposure to annual emissions. Acute (non-cancer) risks were based on exposure to peak hourly and daily emissions (from welding only).

Dose-Response Assessment

Dose-response assessment is the process of characterizing the relationship between exposure to an agent (i.e., DPM) and incidence of an adverse health effect in exposed populations (OEHHA 2015).

When evaluating cancer risk, the dose-response relationship is expressed using a potency slope and can be referred to as a cancer potency factor (CPF). CPFs are used to assess the probability of risk of cancer associated with exposure to a carcinogen. CPFs represent the 95th percent upper confidence limit of the dose-response curve and are expressed as inverse dose in units of milligrams per kilograms body weight per day [mg/kg/day]-1). According to the OEHHA Guidelines, "cancer risk is proportional to dose and there is no threshold for carcinogenesis," meaning there is no safe level of exposure to carcinogens and there is some increment of risk even at very low exposures. CARB and OEHHA have established a CPF for DPM and other TACS, including those present in welding operations. These CPFs are embedded in the HARP model.

For evaluating health impacts related to non-carcinogens, reference exposure levels (RELs) are used. RELs are defined as the concentration ($\mu g/m^3$) at which no adverse non-cancer health effects are anticipated for the specified exposure duration (OEHHA 2015). Unlike carcinogens, non-cancer TACs are assumed to have thresholds for adverse effects. In other words, adverse health effects would not occur until that TAC has reached or exceeded a certain concentration (i.e., threshold) and/or dose (OEHHA 2015).

Risk Characterization

Cancer Risk

Excess lifetime cancer risks are conservatively estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a result of exposure to potential human carcinogens. The estimated cancer risk is expressed as a unitless probability but can be contextualized as the estimated probability an individual has of developing cancer per one million people exposed. Further, the risk estimates generated by the analysis should not be interpreted as the expected rate of cancer in the exposed population, but rather as estimates of potential for cancer, based on current knowledge and assumptions.

For this analysis, cancer risk is based on exposure to both DPM emissions and other TACs from welding operations during construction. For DPM, per OEHHA (2015), the inhalation pathway is the only pathway for DPM exposure, and the Risk Management Policy (RMP) approach was used in the calculations for residential cancer risk (CARB 2015). The RMP approach uses the 95th percentile (high-end) breathing rates for women in their 3rd trimester of pregnancy and 0 to 2 age groups, and it uses the 80th percentile breathing rates for all other age groups. When evaluating risk to children at schools and parks, the analysis conservatively used the 95th percentile breathing rates to account for activities of moderate intensity.

Cancer risk attributed to DPM is calculated by multiplying the chemical dose at the inhalation boundary (e.g., lungs) by the CPF. For cancer risk, the risk for each age group is calculated using the appropriate daily breathing rates, age sensitivity factors, and exposure durations. The cancer risk calculated for individual age groups are summed to estimate the total cancer risk for each receptor.

For welding TACs, the age), all relevant pathways were activated in HARP along with the RMP for breathing rates, dermal climate was set to warm, and deposition rate was set to 0.05 m/s.

Residential exposure duration based on 350 days per year and 24 hours per day. School exposure duration based on 180 days per year and 8 hours per day. Park exposure duration based on 350 days per year and 2 hours per day. An adjustment factor for school and park receptors was not included since construction emission sources were assumed to operate 24-hours per day.

Chronic and Acute Non-Cancer Hazard

OEHHA has developed reference exposure levels (RELs) to determine potential non-cancer health impacts from TACs. An REL is used as an indicator of potential non-cancer health impacts and is defined as the concentration at which no adverse non-cancer health effects are anticipated. RELs incorporate uncertainty factors to help ensure that the REL is protective for nearly all individuals, including sensitive populations (OEHHA 2015).

Individual TACs can affect multiple organ systems (e.g., respiratory system, cardiovascular system, reproductive. etc.) and Hazard Quotient is calculated for each organ system. When multiple TACs are being evaluated, the sum of the HQs of all TACs emitted that affect the same target organ is termed the Hazard Index (HI). RELs have been developed for a number of TACs, exposure pathways, and exposure durations including acute, 8-hour, and chronic. Chronic and acute hazards were estimated in HARP for all pollutants covered in this analysis.

3.1.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of impacts associated with air quality resulting from the proposed project.

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 project 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.

Appendix G of the State CEQA Guidelines further indicates the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the significance determinations. The thresholds used for determining significance of criteria pollutant emissions are presented in Table 3.1-7. These thresholds are based on criteria established by the SDAPCD and supported by additional evidence provided by the County of San Diego.

Neither the City of San Diego nor the District has developed CEQA thresholds of significance for air quality. The SDAPCD does not provide specific quantitative thresholds for determining the significance of air quality impacts under CEQA. However, the SDAPCD does specify AQIA trigger levels for new or modified stationary sources (SDAPCD Rules 20.2 and 20.3). If these incremental levels for stationary sources are exceeded, an AQIA must be performed for the source. Although these trigger levels do not generally apply to mobile sources or general land development projects, for comparative purposes these levels may be used to evaluate increases in emissions.

SDAPCD Rule 20.2, which outlines these significance trigger level thresholds, states that any project which results in an emissions increase equal to or greater than any of these levels, must:

> demonstrate through an AQIA…that the project will not (A) cause a violation of a State or national ambient air quality standard anywhere that does not already exceed such standard, nor (B) cause additional violations of a national ambient air quality standard anywhere the standard

is already being exceeded, nor (C) cause additional violations of a State ambient air quality standard anywhere the standard is already being exceeded, nor (D) prevent or interfere with the attainment or maintenance of any State or national ambient air quality standard.

For projects whose stationary-source emissions are below these criteria, no AQIA is typically required, and project level emissions are presumed to be less than significant. For CEQA purposes, these screening level thresholds (SLTs) can be used to demonstrate that a project's total emissions (e.g., stationary and fugitive emissions, as well as emissions from mobile sources) would not result in a significant impact on air quality.

SDAPCD Rules 20.2 and 20.3 do not have AQIA thresholds for emissions of VOC and $PM_{2.5}$. The County of San Diego notes that the use of the screening level for VOC specified by the South Coast Air Quality Management District (SCAQMD), which generally has stricter emissions thresholds than the SDAPCD, is recommended for evaluating projects in San Diego County. For $PM_{2.5}$, the EPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005, which quantifies significant emissions as 10 tons per year, was identified by the County of San Diego as an appropriate screening threshold. If project emissions exceed these SLTs, specific modeling will be required for NO_2, SO_2, CO, and would require evidence that the project's ground-level concentrations, including appropriate background levels, do not exceed the NAAQS and CAAQS. For ozone precursors, PM_{10} and $PM_{2.5}$, exceedances of the SLTs result in a significant impact because the SDAB is currently not in attainment for PM_{10}, $PM_{2.5}$, and ozone.

Table 3.1-7 Air Quality Thresholds

	Emission Rate		
Air Contaminant	**(pounds per hour)**	**(pounds per day)[1]**	**(tons per year)**
Respirable Particulate Matter (PM_{10})	--	100	15
Fine Particulate Matter ($PM_{2.5}$)[2]	--	55	10
Nitrogen Oxides (NO_X)	25	250	40
Lead (Pb)[3]	--	3.2	0.6
Volatile Organic Compounds (VOC)[4]	--	75	13.7[5]
Sulfur Oxides (SO_X)	25	250	40
Carbon Monoxide (CO)	100	550	100

Source: SDAPCD Regulation II, Rule 20.2; County of San Diego 2007.

1 According to San Diego County, 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 $PM_{2.5}$ AQIA of 67 pounds per day. However, as the 55 pounds per day rate used by SCAQMD and recommended by the County of San Diego is lower (and more restrictive), 55 pounds per day is used here.

3 Lead and lead compounds. Lead emissions are typically associated with industrial large stationary sources, such as ore and metals processing, lead smelters, waste incinerators, and lead-acid battery manufacturing or recycling, which are not included as part of the project.

4 County SLTs for VOC were originally based on the threshold of significance for VOC from SCAQMD for the Coachella Valley. The terms VOC and ROG are used interchangeably, although VOC is used in this table because the City and County use 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 3.1-7 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 O_3 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 the proposed project could increase photochemical reactions and the formation of tropospheric O_3 and secondary PM, which, at certain concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with O_3 and particulate pollution, the effects are a result of cumulative and regional emissions. As such, for a project with relatively small emissions contributions (i.e., emissions below the regional air district thresholds), that 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 not technically feasible. Similarly, there are no publicly available models that can precisely correlate localized CO, PM, and SO_2 emissions to health consequences at specific locations.

Localized Project-Generated Criteria Pollutants (CO, TACs, and Asbestos)

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 to adjacent sensitive receptors. Models and thresholds are readily available to quantify these potential health effects 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 project (TACs CO, and naturally occurring asbestos) are identified below.

Localized Carbon Monoxide Concentrations

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below state and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more (SCAQMD 1993). The following are applicable local emission concentration standards for CO.

- CAAQS and NAAQS 1-hour CO standards of 20 and 35 ppm, respectively
- CAAQS and NAAQS 8-hour CO standard of 9.0 and 9 ppm, respectively

As in most urban areas, high short-term concentrations of CO, known as *hotspots*, can occur in San Diego County. Hotspots typically occur in areas of high motor vehicle use, such as in parking lots, at congested intersections, and along highways. Because elevated CO concentrations typically occur at locations with high traffic volumes and congestion, elevated CO concentrations are often correlated

with level of service (LOS) at intersections. LOS expresses the congestion level for an intersection and is designated by a letter from A to F, with LOS A representing the best operating conditions and LOS F the worst. Significant concentrations of CO sometimes occur (depending on temperature, wind speed, and other variables) at intersections where LOS is rated at D or worse. Projects that do not generate CO concentrations in excess of the health-based CAAQS would not contribute a significant level of CO such that localized air quality and human health would be substantially degraded.

Localized Toxic Air Contaminant Concentrations

Toxic air pollutants are regulated through SDAPCD Regulation XII. 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. Diesel PM is the most troublesome TAC in urban areas. Other TACs of concern, particularly at shipyards, including hexavalent chromium, arsenic, nickel, and manganese.

The County has adopted incremental cancer and hazard thresholds to evaluate receptor exposure to DPM emissions, which are adapted from SDAPCD Regulation XII, Rule 1200. 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 BACT,[4] MICR greater than 10 in 1 million with application of Toxics BACT, or a chronic and acute non-cancer health hazard index greater than 1 would be deemed as having a potentially 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 the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in the Code of Federal Regulations.

Criteria for Cumulative Impacts

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 reasonably foreseeable projects on O_3 within the SDAB; or globally, such as the potential impact of GHG emissions on global climate change.

Neither the District, nor the City of San Diego, nor SDAPCD has adopted quantitative thresholds to determine whether a project would make a cumulatively considerable contribution to air quality. The County of San Diego thresholds (see below) for cumulative air quality impacts are utilized for the analysis of the impacts of proposed project construction and operations related to emissions on air quality.

[4] Best Available Control Technology (BACT) is the level of air contaminant emission control or reduction required by state law and District rules for new, modified, relocated, and replacement emission sources. Examples of Toxics BACT include diesel particulate filters, catalytic converters, and selective catalytic reduction technology.

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 PM_{10}, $PM_{2.5}$, NO_X, and/or ROGs (i.e., an exceedance of threshold values indicated in Table 3.1-7) would also have a significant cumulatively considerable net increase.
- In the event that direct impacts from the proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other past, present, or reasonably foreseeable 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 PM_{10}, $PM_{2.5}$, NO_X, and/or ROGs (i.e., an exceedance of threshold values indicated in Table 3.1-7) would also have a significant cumulatively considerable net increase.
- Projects that cause road intersections to operate at or below LOS E for intersections with total (proposed project and surrounding project) peak-hour trips in excess of 3,000 trips and create a CO hotspot would create a cumulatively considerable net increase of CO.

3.1.4.3 Project Impacts and Mitigation Measures

Threshold 1: Would the project conflict with or obstruct implementation of an applicable air quality plan?

Impact Discussion

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 (i.e., O_3, PM_{10}, and $PM_{2.5}$). The most recent SDAPCD air quality attainment plans are the 2016 RAQS (adopted), 2022 RAQS (currently in Draft form), and the 2020 O_3 attainment plan. The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for O_3, while the 2020 O_3 attainment plan includes SDAPCD's plans and control measures for attaining the NAAQS for O_3. The RAQS and SIP project future emissions and determine the strategies necessary for the reduction of stationary source emissions through regulatory controls. The RAQS relies on the 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. The 2020 O_3 attainment plan represents SDAPCD's portion of the SIP. The SIP is a comprehensive plan of previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, State regulations, and federal controls that describes how each nonattainment area in the state will meet NAAQS, as described in Section 3.1.3.3, *Regional*.

The simplest test to assess project consistency is to determine if the project proposes development that is consistent with the growth anticipated by the relevant land use plans that were used in the

formulation of the RAQS and SIP; if so, then the project would be consistent with the RAQS and SIP. Moreover, if the project 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 the project would be consistent with the RAQS and SIP.

The PMP is the governing land use document for physical development within the District. Projects that propose development consistent with growth anticipated by the current PMP are considered consistent with the RAQS and SIP. Moreover, if a project would propose development that is less dense than anticipated within the current PMP, the project would likewise be consistent with the RAQS and SIP because emissions would be less than estimated within the current PMP. If a project proposes development that is greater than that anticipated in the PMP and SANDAG's growth projections, the project would be in conflict with the RAQS and SIP and might have a potentially significant impact on air quality because emissions would exceed those estimated for the existing land use plan (i.e., PMP). This situation would warrant further analysis to determine if a proposed project and surrounding projects would exceed the growth projections used in the RAQS for a specific subregional area.

As discussed in detail in Section 3.7, *Land Use and Planning*, the proposed project is within the Harbor Drive Industrial Subdistrict of Planning District 4, which is dedicated for shipbuilding and ship repair for the defense and maritime industries. PMP land and water use designations within the project site include Marine Related Industrial and Specialized Berthing. Planning District 4 is the only area in the entire San Diego region with an established waterfront industrial shipping operation.

The purpose of the proposed project is to maintain and improve existing facilities for the berthing needs of the current and future military and commercial customers while modernizing equipment and facilities. Construction and operation of the proposed project would not result in an increase in shipbuilding and repair operations, or additional employees beyond those needed during construction.

No changes in land uses would occur, and the proposed project would not result in land use designations that would be incompatible with existing onsite PMP land use designations. In addition, the project would be consistent with the District's Green Port and Clean Air Programs, which aim to reduce air pollution from operations at the Port and include various strategies that the District is employing to reduce criteria pollutant and GHG emissions from its largest sources. The proposed project would also comply with SDAPCD rules that have been implemented to reduce regional particulate matter and O_3 emissions—Rule 50 (Visible Emissions), Rule 51 (Nuisance), Rule 52 (Particulate Matter), Rule 54 (Dust and Fumes), Rule 55 (Fugitive Dust Control), and Rule 67 (Architectural Coatings)—and fugitive dust control measures during any demolition activities.

As discussed in Section 3.1.1.3, the MCAS and the CERP propose goals to reduce air pollution from maritime cargo terminal and industrial-related operations. MCAS goals and measures are designed to be implemented if feasible and through future binding actions, by the District, but not necessarily on a project-by-project basis. In addition, although the District's participation in the CERP and its implementation is important, most of the CERP's goals and actions, as enumerated, are not applicable to or under the control of the District to implement. For instance, a substantial component of the CERP is premised on future regulatory or policy action by the SDAPCD and/or CARB, and expanding and evolving the enforcement program to increase compliance rates, increase outreach efforts, and maximize compliance (see Chapters 5 and 6 of the CERP). Nevertheless, to provide full public disclosure and informed participation, this section includes an analysis of whether the proposed project would conflict with or obstruct implementation of the MCAS and CERP.

Tables 3.1-8 and 3.1-9 discuss whether the proposed project conflicts with or obstructs implementation of the goals and objectives of the District's MCAS and SDAPCD's CERP to inform the public and Board regarding the proposed project's likely near-term and long-term impacts, if any. Merely being inconsistent with a MCAS or CERP goal or objective would not necessarily be considered a significant impact under CEQA in itself; rather, the inconsistency must result in a substantial adverse effect on the environment. As documented in Tables 3.1-8 and 3.1-9, no inconsistencies have been identified that would result in a significant impact on the environment.

Table 3.1-8 Maritime Clean Air Strategy Inconsistency Analysis

Goals and Objectives	Proposed Project Applicability and Consistency
Long-Term Goals	
Long-term Goal for Trucks: In advance of the State's goals identified in Executive Order No. N-79-20, attain 100% ZE truck trips by 2030 for all trucks that call to the Ports two marine cargo terminals.	**Not Applicable.** The proposed project is not located at one of the Port's marine terminals. The proposed project is not inconsistent with and does not obstruct the Port from attaining 100% ZE truck trips.
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% ZE by 2030.	**Not Applicable.** The proposed project does not involve the use of cargo handling equipment. The proposed project is not inconsistent with and does not obstruct the Port from transitioning diesel cargo handling equipment to 100% ZE.
Long-term Goal for Harbor Craft: Tugboat-related Diesel Particulate Matter (DPM) emissions identified in the Port's Emissions Inventory (2019) will be reduced by half by transitioning to ZE/near zero emission (NZE) technologies and/or other lower-emitting engines or alternative fuels.	**Consistent.** The proposed project would result in the reduction of tugboat-related DPM emissions during operations. Specifically, the new floating dry dock position at Lot 20 would reduce the distance of tugboat trips because the floating dry dock would no longer need to be repositioned farther away from the home position within the NASSCO leasehold during vessel launches. Furthermore, the proposed project would not obstruct transition of tugboats to technologies that reduce emissions (as tugs are owned by other operators and this transition is not related to operations of the shipyards).
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: Transition light-, medium-, and heavy-duty vehicles beginning in 2022 to ZE. Transition emergency vehicles to alternative fuels including hybrid, electric, and/or low carbon fuels. Convert equipment, such as forklifts and lawn maintenance equipment, to ZE. Seek opportunities to advance lower emitting solutions for marine vessels	**Not Applicable.** The NASSCO shipyard is a privately owned and operated shipyard facility. As such, the proposed project is not inconsistent with and does not obstruct the Port's ability to transition Port-owned fleet vehicles and equipment to ZE/NZE emission technologies.
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.	**Not Applicable.** The proposed project is not located at one of the Port's marine terminals. The proposed project is not inconsistent with and does not obstruct the District from advancing implementation of shore power infrastructure and/or alternative technology to reduce ocean-going vessel emissions. Vessels within the dry dock are connected to shorepower when the dock is not in transit.

Goals and Objectives	Proposed Project Applicability and Consistency
Near-Term Goals and Objectives (2021 to June 30, 2026)	
Health	
Health Goal I. Protect and improve community health by reducing emissions and lessening Portside Community residents' exposure to poor air quality.	**Consistent.** The proposed project would result in the reduction of emissions during operations. Specifically, the new Lot 20 position would reduce the distance of tugboat trips because the floating dry dock would no longer need to be repositioned farther away from the home position within the NASSCO leasehold during vessel launches. As such, the proposed project's operational characteristics would result in reduced fuel use that would improve air quality and reduce TACs, when compared to existing conditions. In addition, the proposed project would include installation of replacement diesel generators that would be U.S. EPA Tier 4-rated and would be outfitted with a closed-loop cooling water system. In addition, the new floating dry dock would be outfitted with an extensive electrical distribution system in an effort to reduce the quantity of temporary diesel air compressors utilized for production operations, as well as a modern electric salt water pumping system to minimize the need for portable diesel salt water pumps. These improvements would reduce diesel emissions when compared to existing conditions. Furthermore, the use of off-road equipment with Tier 4 engines during project construction would be required as project conditions of approval to reduce construction-related emissions.
Health Objective 1: By October 2021, identify existing health risk levels generated from the Port's Tenth Avenue Marine Terminal and the National City Marine Terminal for Diesel Particulate Matter (DPM) and other Toxic Air Contaminant emissions. a. Reduce DPM Emissions: The Health Risk Assessment (HRA) may be used to inform an emission reduction goal. b. Reduce Health Risk: The HRA may be used to inform a cancer risk reduction goal.	**Not Applicable.** The proposed project is not located at one of the Port's marine terminals. The proposed project is not inconsistent with and would not obstruct the Port's ability to identify existing health risk levels generated at the Tenth Avenue Marine Terminal and National City Marine Terminal, nor would it affect the Port's ability to inform an emission reduction goal or cancer risk reduction goal at the marine terminals.
Health Objective 2: Assist the San Diego Air Pollution Control District and the California Air Resources Board with preparing a cumulative or community health risk analysis for the AB 617 Portside Community by providing them with the Port's Health Risk Assessment (October 2021) and other operational related information.	**Not Applicable.** This objective is not applicable as it pertains to sharing of information between the SDAPCD and the District.
Health Objective 3: Work collaboratively with the San Diego Air Pollution Control District (SDAPCD) on the SDAPCD's Portside Air Quality Improvement and	**Not Applicable.** The Port Maritime Industrial Impact Fund is administered by the District, not NASSCO; therefore, the proposed project is not inconsistent

Goals and Objectives	Proposed Project Applicability and Consistency
Relief (also known as PAIR) program, including pursuing a Memorandum of Agreement with the SDAPCD to contribute Port Maritime Industrial Impact Fund for the SDAPCD's purchase and installation of new portable air filtration devices at participating Portside Community residences.	with and would not obstruct the District's ability to pursue an MOA with the SDAPCD to purchase and install residential air filtration devices in participating Portside community residences.
Health Objective 4: Collaborate with the San Diego Air Pollution Control District (SDAPCD) as they evaluate and consider developing a new rule to control emissions from indirect sources, in accordance with the timelines and dates established by the SDAPCD.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District's ability to collaborate with the SDAPCD to develop new rules to control emissions.
Community	
Community Goal 1: Enrich the AB 617 Portside Community through Education, Engagement, and Urban Greening.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District's ability to enrich the AB 617 Portside Community through community education, engagement, and urban greening.
Community Objective 1: Rely on established processes for stakeholders and the public to provide input in the selection, deployment, and on-going monitoring of emission reduction projects.	**Not Applicable**. Community Objective 1 promotes active stakeholder and public involvement regarding District initiatives and other measures to facilitate emissions reductions. The proposed project is a waterfront improvement project that would result in lower operational emissions once the proposed project elements are constructed. As such, it is not inconsistent with and does not obstruct the District's ability to engage with and received input from stakeholders and the public on the issue of emission reductions.
Community Objective 2: Port staff will provide the Board of Port Commissioners, Barrio Logan Community Planning Group, the National City Council, and the AB 617 Portside Community Steering Committee with periodic updates on the status of its emission reduction projects and initiatives and associated emission reduction levels.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District's ability to provide status updates and/or to inform various governing and/or advisory bodies of the District's emission reduction projects.
Community Objective 3: Port staff will convene a group of stakeholders to explore increasing tree canopy in the Portside Community and continue to work with groups like Urban Corps of San Diego County to advance this objective.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District's ability to engage stakeholders on issues of community concern.
Community Objective 4: Support the expansion of the Port's existing outdoor educational programs to increase participation of youth that live in the AB 617 Portside Community.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District's ability to support the expansion of existing outdoor educational programs to youth that live in the AB 617 Portside Community.
Community Objective 5: Work with Portside Community residents and stakeholders to complete a comprehensive update in 2025 to the MCAS, including	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District's ability to engage with residents and stakeholders to

Goals and Objectives	Proposed Project Applicability and Consistency
goals and objectives for 2026 to 2030 that are Specific, Measurable, Attainable, Relevant, Timebound, Inclusive, and Equitable that reflects updated technology, regulations, and market conditions.	complete a comprehensive update of the District's MCAS in 2025, which would include setting goals and objectives for the 2026 to 2030 time period.
Cargo Handling Equipment	
Cargo Handling Equipment Goal 1: Attain substantial reductions for cargo handling equipment related emissions by facilitating upgrades to zero emission/near zero emission equipment alternatives.	**Not Applicable.** NASSCO specializes in the design and construction of auxiliary and support ships for the U.S. Navy and commercial markets. Consequently, NASSCO's operations do not involve the use of cargo handling equipment as the shipyard does not receive, store, or transport cargo.
Cargo Handling Equipment Objective 1: Reduce emissions from cargo handling equipment by approximately 90% for nitrogen oxides (NO_X), 80% for diesel particulate matter (DPM), and 50% for carbon dioxide equivalent (CO_2e) below 2019 levels by January 1, 2025.	**Not Applicable.** NASSCO's operations do not involve the use of cargo handling equipment or movement of cargo. Therefore, the proposed project is not inconsistent with and does not obstruct the District's ability to reduce NOx, DPM, and CO_2e emissions, associated with cargo handling equipment, which operate at the Port's marine cargo terminals.
Harbor Craft	
Harbor Craft Goal 1: Reduce emissions from Harbor Craft by advancing emerging zero emission and advanced technologies.	**Not Applicable.** The proposed project would not be inconsistent with or obstruct a future transition to advanced Harbor Craft technologies that would reduce emissions. The proposed project would reduce Harbor Craft emissions (specifically from assist tugs) compared to existing conditions due to the reduced distance to move the dry dock to its temporary moorage at Lot 20.
Harbor Craft Objective 1: Facilitate implementation of the first all-electric tugboat in the United States by June 30, 2026.	**Not Applicable.** NASSCO's shipyard operations require the periodic use of tugboats to assist the movement of vessels in and out of mooring. However, NASSCO does not control tugboats, nor would implementation of its proposed project obstruct pursuit of an all-electric tugboat in San Diego Bay. These harbor craft are owned by third parties, not NASSCO, and the implementation of all-electric tugboats is not within the control of NASSCO.
Harbor Craft Objective 2: Identify suitable projects to assist with advancing the State's goals for commercial harbor craft by supporting: Existing fuel docks with the transition to renewable diesel by January 1, 2023; Installation and maintenance of landside shore power for all facilities that receive more than 50 visits per year by 2024; All new excursion vessels transition to zero emission capable hybrid technologies starting on January 1, 2025; and	**Not Applicable.** The proposed project does not involve the use of fueling docks. No excursion or short run ferry operations are associated with shipyard operations.

Goals and Objectives	Proposed Project Applicability and Consistency
Short run ferry-operators transition to zero emission technologies for all new and in use short-run (under 3 nautical miles) trips starting on January 1, 2026.	
Truck	
Truck Goal 1: Improve the air quality in the Portside Community by accelerating the implementation of zero emission/near zero emission trucks.	**Not Applicable.** The proposed project is a waterfront improvement project for a privately owned and operated shipyard facility, and it does not involve the use of heavy duty trucks that transport cargo to/from the Port's two marine cargo terminals. As such, the proposed project is not inconsistent with and does not obstruct the District's ability to accelerate the implementation of zero/near-zero emission trucks.
Truck Objective 1A: Prepare a heavy-duty truck transition plan by June 30, 2022 with ZE heavy-duty truck transition benchmarks of 40% of the Port's annual truck trips by June 30, 2026 and 100% by December 31, 2030 that includes the following: i. A compilation of all foreseeable tasks and their timelines including: charging infrastructure development; planning and implementation of a short-haul truck program; and creation of a truck registry. ii. Development of key policy concepts such as additional revenue source mechanisms and guidelines to utilize them; and new lease provisions for ZE truck requirements. This section should include the process required for consideration and adoption by the Board as well as their projected hearing dates. iii. Compilation and analysis of truck data (e.g. truck ownership, delivery distances within San Diego region and beyond) needed to prepare the transition plan.	**Not Applicable.** Pursuant to Objective 1A, the District is preparing a heavy duty truck transition plan, the details of which will include provisions that will aid and further facilitate the transition to ZE truck technologies, consistent with the objective. The proposed project will not be inconsistent with or obstruct the District's ability to prepare a truck transition plan that includes the three components that the Board directed staff to include in the heavy-duty truck transition plan.
Truck Objective 1B: By the end of 2022, Port staff will develop and present a short-haul, on-road, Zero Emission Truck Program for the Board's consideration that includes at least one collaborating trucking company and that targets having the necessary charging infrastructure in place by 2024, in order to displace approximately 65,000 diesel vehicle miles traveled.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District's ability to develop a Zero Emission Truck Program by the end of 2022.
Truck Objective 1C: Coordinate with the California Air Resources Board as they continue to develop the Advanced Clean Fleet Regulation regarding the transition to zero emission trucks to better understand associated State forecasts and forthcoming rulemaking.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District's ability to coordinate with CARB as they continue to develop the Advanced Clean Fleet Regulation.
Truck Objective 1D: In collaboration with the California Air Resources Board, the Port will utilize a truck registry or other system to summarize annual	**Not Applicable.** The proposed project is not located at one of the marine terminals. Therefore, it is not inconsistent with and does not obstruct the District's ability to create and/or utilize a truck registry

Goals and Objectives	Proposed Project Applicability and Consistency
truck trips to the Port's marine cargo terminals and measure progress to achieve Port goals.	system to gain additional information relating to trucks the Port's marine terminals.
Truck Objective 1E: Provide status report to the Board of Port Commissioners with recommendations on zero emission truck technologies, as well as an evaluation of potential impacts to small fleets and/or independent truck drivers, as part of a biennial emissions reporting to better understand the transition zero emission truck technology.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct District staff from reporting to the Board of Port Commissioners.
Truck Goal 2: Facilitate the deployment of infrastructure to support the transition to zero emission truck trips to the Port's marine cargo terminals.	**Not Applicable.** The NASSCO shipyard is not located at one of the Port's marine cargo terminals.
Truck Objective 2A: Within the fourth quarter of calendar year 2022, present a concept plan to the Board for its consideration that identifies four potential public-facing medium-duty/heavy-duty charging locations within the San Diego Region to support deployment of zero emission trucks, which may include locations in close proximity to or on the Tenth Avenue Marine Terminal and/or the National City Marine Terminal.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct District staff from identifying potential locations for infrastructure to support deployment of zero emission trucks.
Truck Objective 2B: Collaborate and coordinate with community residents, stakeholders, and agencies to ensure that the medium-duty/heavy-duty zero emission truck charging facilities identified in Objective 2A are aligned with and connect to the region's larger zero emission vehicle charging infrastructure system.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct District staff from ensuring any marine terminal truck charging infrastructure is consistent with other regional efforts to deploy and install truck charging infrastructure.
Truck Goal 3: Support the designated truck route to avoid truck impacts on the local community.	**Consistent.** Trucks over five (5) tons are required to follow the designated Truck Route along Harbor Drive to access north or southbound Interstate 5 or northbound Interstate 15, as adopted 10/31/2018 by the City of San Diego Resolution R-2019-249. The designated truck route to and from the proposed project, including enforcement of compliance with the applicable requirements, is within the jurisdiction and control of the City of San Diego, not the District. Nonetheless, the proposed project requires the issuance of a Coastal Development Permit which has been conditioned, as all projects located along the working waterfront, to require the use of the City of San Diego's designated Truck Route to further emphasize and improve compliance with the designated trucking route.
Truck Objective 3A: Work with partners to continue advancement of the connected and flexible freight and transit haul route concept to provide more efficient freeway access and encourage truck drivers to avoid	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct District staff from advancing the flexible freight and transit route concept.

Goals and Objectives	Proposed Project Applicability and Consistency
residential neighborhoods by leveraging technology to support dedicated lanes and signal prioritization.	
Fleet	
Fleet Goal 1: Update Port purchasing and/or procurement policies to acquire zero emission vehicles and best available alternative fuels or technologies.	**Not Applicable.** NASSCO is not involved in the update to the District's procurement policies.
Fleet Objective 1A: Update the Port's vehicle purchasing and/or procurement policy in Fiscal Year 2022 to identify a hierarchy of procurement considerations that prioritize zero emission vehicles, followed by the utilization of best available alternative fuels, to ensure Port fleet upgrades and replacements obtain the lowest emitting option available.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct District staff from updating procurement policies.
Fleet Objective 1B: Create a zero emission vehicle transition plan in Fiscal Year 2022 for the Port's fleet of vehicles and equipment that identifies a long-term acquisition schedule for when current vehicles and equipment will be phased out and when new electric vehicles and equipment are anticipated to be procured.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct District staff from developing a plan to transition the District fleet to zero emission vehicles.
Fleet Goal 2: Procure zero emission vehicles and necessary electric vehicle charging equipment and infrastructure beginning in Fiscal Year 2022.	**Not Applicable.** NASSCO is not involved in the District's procurement of zero emission vehicles and associated infrastructure.
Fleet Objective 2A: Procure at least two battery electric medium- to heavy-duty vehicles in Fiscal Year 2022. where feasible, provided. Developments providing public recreational opportunities are preferred.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District from procurement of two battery electric vehicles.
Fleet Objective 2B: Identify power needs and electric vehicle charging options at the General Services facility and apply to SDG&E's Power Your Drive for Fleets Program in calendar year 2021.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct District staff from identifying power needs and apply for program funding.
Shipyard	
Shipyard Goal 1: Collaborate with the San Diego Air Pollution Control District as they review and propose modifications to applicable rules, regulations, and/or programs.	**Consistent.** NASSCO shipyard is subject to numerous laws and regulations implemented by the SDAPCD and would be a willing collaborative participant during modification or update to existing regulations. The project would not obstruct the ability of the District to collaborate with the SDAPCD on new and/or modified rules (regulations) that may be adopted by the SDAPCD. As applicable, the proposed project 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

Goals and Objectives	Proposed Project Applicability and Consistency
	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 in Regulation 8 as sources that emit 100 tons per year of PM_{10}, SO_x, CO, and lead; and 50 tons per year of NO_x and volatile organic compounds (VOC) in federal O_3 nonattainment areas. Rule 50—Visible Emissions: establishes limits for the opacity of emissions within the SDAPCD. The proposed project 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. 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

Goals and Objectives	Proposed Project Applicability and Consistency
	as part of this regulation are used in the health risk assessment herein.
Shipyard Objective 1: Collaborate with the San Diego Air Pollution Control District as they evaluate and consider potentially lowering the health risk in Rule 1210, including the threshold for stationary sources that reduce their estimated cancer risk.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct implementation of this objective, which was completed in November 2021. More specifically, with input from the District, the SDAPCD updated Rule 1210 to lower the health risk threshold from 100 per one million to 10 per million on November 4, 2021.
Shipyard Objective 2: Continue to work with the shipyard facilities to identify and implement emission reduction projects and, subject to further Board approval, require such implementation, and support the shipyard-related actions that are identified in the Portside Community's AB 617 Community Emissions Reduction Program.	**Consistent.** The District and all shipyard facility operators, including NASSCO, will continue to work together to identify additional projects, programs, and initiatives intended to reduce emissions and increase efficiency at the shipyards and be consistent with the CERP. Implementation of the proposed project would not be inconsistent with or obstruct future coordination and implementation of such actions.
Ocean-Going Vessels	
Ocean-going Vessels In-Transit Goal 1: Reduce annual ocean-going vessel in-transit emissions.	**Not Applicable.** Ocean-going vessels are used to transport goods and people to and from domestic and international seaports. Ocean-going vessels visit the Port's two marine cargo terminals and the two cruise ship terminals. The proposed project does not involve the movement of goods or people to and from seaports, nor is the shipyard located at one of the Port's marine terminals or cruise ship terminals.
Ocean-going Vessels In-Transit Objective 1A: Pursue implementing an expanded Vessel Speed Reduction Program that achieves upwards of 90% participation, subject to further Board of Port Commissioners' approval.	**Not Applicable.** Vessels serviced at the proposed project site arrive from US Navy Base San Diego, within San Diego Bay where the VSR program does not apply. The Vessel Speed Reduction Program is a voluntary program asking cargo vessel operators entering or leaving San Diego Bay to observe a 12-knot speed limit. NASSCO operations involve the design and construction of auxiliary and support ships. Shipyard operations within the NASSCO leasehold would not involve activities that would be inconsistent with the Vessel Speed Reduction Program.
Ocean-going Vessels At-Berth Goal 2: Reduce ocean-going vessels' at-berth emissions by expanding existing and/or developing new shore power systems and/or equivalent technologies at the Port's marine terminals.	**Consistent.** The proposed project is not located at one of the Port's marine terminals. When vessels berth or dock for repairs, upgrades, and maintenance, their engines are turned off. The proposed project is not inconsistent with and does not obstruct the District from advancing implementation of shore power infrastructure and/or alternative technology to reduce ocean-going vessel emissions while at berth.

Goals and Objectives	Proposed Project Applicability and Consistency
Ocean-going Vessels At-Berth Objective 2A: For cruise ships, add one additional plug to the existing shore power system by 2023.	**Not Applicable.** The proposed project does not involve the operation of cruise ships.
Ocean-going Vessels At-Berth Objective 2B: At the National City Marine Terminal, add a new shore power system with at least two plugs and/or an alternative technology that reduces ocean-going vessel emissions at berth by 2025.	**Not Applicable.** The proposed project is not located at the National City Marine Terminal.
Rail	
Rail Goal 1: Upgrade rail capabilities at the Tenth Avenue Marine Terminal to allow for more efficient and cleaner operations.	**Not Applicable.** The proposed project does not involve operations at the Tenth Avenue Marine Terminal.
Rail Objective 1: Outline options to further develop rail upgrades, including rail reconfiguration within the Tenth Avenue Marine Terminal by June 30, 2026.	**Not Applicable.** The proposed project does not involve the use of rail services; the proposed project is not located at the Tenth Avenue marine Terminal.
Rail Goal 2: Promote the use of a Single Engine Tier 4 Switcher if applicable to operations at the Tenth Avenue Marine Terminal and National City Marine Terminal.	**Not Applicable.** The proposed project does not involve the use of switchers and it is not located that the Tenth Avenue Marine Terminal or the National City Marine Terminal.
Rail Objective 2: Encourage tenants that rely on rail operations that move cargo to use cleaner switchers.	**Not Applicable.** The proposed project does not rely on rail operations.
Enabling Goals	
Enabling Goal 1: Establish partnerships with stakeholders, tenants, and agencies to help increase the likelihood of implementation and project success.	**Not Applicable.** This goal focuses on partnerships established and maintained by the District to advance emission reduction projects within and around Tidelands to achieve the goals and objectives of the MCAS. The proposed project is not inconsistent with and does not obstruct the District's ability to establish partnerships to increase the likelihood of implementation of zero emission initiatives and/or projects.
Enabling Objective 1A: Pursue a potential Memorandum of Understanding with the San Diego Air Pollution Control District to administer California Air Resources Board Funding to help fund zero emission/ near zero emission trucks and/or cargo handling equipment.	**Not Applicable**. The proposed project is not inconsistent with and does not obstruct the District from pursuing an MOU with SDAPCD and/or CARB.
Enabling Objective 1B: Work with the California Department of Transportation and other west coast ports to implement domestic shipping services to reduce emissions by facilitating the movement of goods by waterborne routes that are currently served by trucks or rail.	**Not Applicable.** The proposed project does not involve domestic shipping services and is not inconsistent with and does not obstruct the District's ability to work with the California Department of Transportation to facilitate the movement of goods by waterborne routes.
Enabling Goal 2: Conduct the necessary research and analysis to inform additional options that could be used to help attain emission reductions and other MCAS-related goals.	**Not Applicable.** This goal focuses research and analysis for the District to advance emission reduction projects within and around Tidelands to achieve the goals and objectives of the MCAS. The

Goals and Objectives	Proposed Project Applicability and Consistency
	proposed project is not inconsistent with and does not obstruct the District's ability to conduct additional research and analysis to inform additional options that could be used to attain emission reductions and other MCAS-related goals.
Enabling Objective 2A: Create a clearinghouse process to track progress towards achieving MCAS and relevant AB 617 CERP goals and objectives, including technology and emission improvements associated with development, within 30-days of final approval of both documents.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District from creating a clearinghouse to track and monitor MCAS-related goals and objectives.
Enabling Objective 2B: Establish an Emissions Reduction Incentive Program.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District from developing an emissions reduction incentive program.
Enabling Objective 2C: Prepare a market study/feasibility analysis for the Board of Port Commissioners that explores a range of potential fees that can support zero emission/near zero emission reduction projects, as well as identify any implications the fee may have on the Port's revenue and maritime business opportunities.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District's ability to prepare a market/feasibility study for the Board of Port Commissioners, that considers a range of fees that can support zero emission/near zero emission projects.
Enabling Objective 2D: Explore potential credentials for installation and maintenance of emerging zero emission technologies and report recommendations to the Board of Port Commissioners by end of calendar year 2021.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the District's ability to provide a report and recommendations to the Board of Port Commissioners that explores potential credentials for the installation and maintenance of emerging zero emission technologies.
Enabling Objective 2E: Promote adoption of zero emission technologies by Port tenants, truckers, and other users of equipment.	**Consistent.** The proposed project would result in the reduction of emissions from harbor craft and diesel sources during operations. In addition, although the proposed project would not exceed a significance threshold for criteria pollutants or toxic air contaminants, the use of off-road equipment with Tier 4 engines during project construction would be required as a project condition to reduce construction-related emissions. The proposed project would not obstruct or limit the ability of the District, in conjunction with its tenants, to promote, adopt, and implement zero emissions technologies across the District, including at the shipyards.

Source: San Diego Unified Port District 2021a

Table 3.1-9 Community Emissions Reduction Program Inconsistency Analysis

Goals and Strategies	Proposed Project Consistency
Goal 1. By 2031, reduce Diesel PM from 2018 levels by 80% in ambient air at all Portside Community locations.	**Consistent.** Goal 1's aspirational objectives are long-term and may be pursued through a variety of measures, including future regulatory or policy action by the SDAPCD (and other public agencies, organizations, and businesses). The proposed project would result in the annual reduction of DPM from operation activities and would help assist in meeting the 80% reduction goal by 2031. In addition, although the proposed project would not exceed a significance threshold for criteria pollutants or toxic air contaminants, the use of off-road equipment with Tier 4 engines during project construction would be required as a project condition.
Goal 2. Medium and Heavy Duty trucks servicing Portside Community to be 100% ZEV 5 years ahead of the California state requirements.	**Not Applicable.** The proposed project complies with all applicable laws, regulations, and policies pertaining to air quality emissions and does not propose construction activities or changes in existing operations that involve medium or heavy-duty trucks servicing the Portside Community. The proposed project is not inconsistent with and does not obstruct the SDAPCD or CARB from developing and implementing ZEV requirements for medium and heavy-duty trucks; until such requirements are established with a time certain implementation date, it cannot be determined if and when the proposed project can meet as yet defined requirements.
Goal 3. Establish ZEV HD/MD truck charging infrastructure in Portside, by specified dates in Action E1, with 4 sites operational by 2026.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct SDAPCD staff from establishing ZEV HD/MD truck charging infrastructure. The SDAPCD and/or other entities may pursue and establish charging infrastructure, in strategic locations, designed to facilitate the use of ZE trucks.
Goal 4. Reduce emissions from HD/MD trucks servicing indirect sources by 100% 5 years in advance of regulatory requirements.	**Not Applicable.** The proposed project is in compliance with all applicable laws, regulations, and policies pertaining to air quality emissions and does not propose construction activities or changes in existing operations that involve medium or heavy-duty trucks serving the Portside Community. The proposed project is not inconsistent with and does not obstruct CARB from developing and implementing emission reduction requirements for medium and heavy-duty trucks serving the Portside Community. Until such requirements are established with a time certain implementation date, it cannot be determined if and when the proposed project can meet as yet defined requirements.

Goals and Strategies	Proposed Project Consistency
Goal 5. By December 2021, APCD to present the cumulative cancer risk for Portside Communities from Health Risk Assessments and modeling of cumulative risk (including freeways, rail, vessels, stationary sources, etc.) to inform Goal #6. APCD can achieve this modeling goal with CARB assistance and input from the Portside Community Steering Committee including methodology and input data.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct SDAPCD staff from presenting the cumulative cancer risk for Portside Communities from Health Risk Assessments and modeling of cumulative risk.
Goal 6. By February 2022, establish an estimated cancer risk reduction goal based on the modeling that is done in Goal #2. Estimated cancer risk at all census tracts in Portside Community from locally generated emissions, including both stationary and mobile sources, to meet goals of ___/ million by 2026 and ___ /million by 2031.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct SDAPCD staff from establishing an estimated cancer risk reduction goal.
Goal 7. Conduct a Health Risk Assessment (HRA) at the Port's two marine cargo terminals to establish an updated baseline that relies on the most recent source characterization and activity from the Port's 2019 Emissions Inventory to inform aspirational goals in support of public health community priorities: 2) By October 2021, identify existing health risk levels generated from the Port's Tenth Avenue Marine Terminal (TAMT) and the National City Marine Terminal (NCMT) for Diesel Particulate Matter (DPM) and other Toxic Air Contaminant (TAC) emissions. a. Reduce Health Risk: The HRA may be used to inform an aspirational goal of reducing cancer risk b. Reduce DPM Emissions: The HRA may be used to inform an aspirational emission reduction goal c. Assist the San Diego Air Pollution Control District (SDAPCD) and the California Air Resources Board (CARB) with preparing a cumulative cancer risk analysis for the AB 617 Portside Community by providing them with the Port's HRA (October 2021) and the other operational related information.	**Goal 7 Not Applicable.** The NASSCO shipyard is not located at the District's marine terminals Priority 2) Not Applicable. The NASSCO Shipyard is not located at the District's marine terminals. Priority 2) a. Not Applicable. The proposed project is not inconsistent with and does not obstruct SDAPCD staff from developing an aspirational goal to reduce cancer risk. Priority 2) b. Not Applicable. The proposed project is not inconsistent with and does not obstruct SDAPCD staff from developing an aspirational goal to reduce emissions. Priority 2) c. Not Applicable. The proposed project is not inconsistent with and does not obstruct SDAPCD staff from establishing an estimated cancer risk reduction goal. Priority 2) c. Not Applicable. The proposed project is not inconsistent with and does not obstruct Port staff from assisting SDAPCD and CARB in preparing a cumulative cancer risk analysis.
Goal 8. By 2026 reduce cancer risk below 10/million for each permitted stationary source, including portable equipment, in the Portside Environmental Justice Community.	**Consistent.** The proposed project would generate emissions from construction activities. The Health Risk Assessment prepared for the proposed project concluded that the cancer risk to receptors at the nearest school in the vicinity of the project site, Logan Memorial Educational Center, due to construction emissions would be 1.2 chances per million. The chronic non-cancer health hazard index at the nearest school would be 0.00036; both indices are below 10 cases per million. The project will not be inconsistent with or obstruct the District from reducing cancer risk in the Portside Community, for emissions associated with activities on Tidelands.

Goals and Strategies	Proposed Project Consistency
Goal 9. By 2031 complete Harbor Drive 2.0 truck freight improvements, including enforcement and signage of truck route for National City.	**Not Applicable.** The project site is not located in National City; therefore, the proposed project is not inconsistent with and does not obstruct completion of Harbor Drive 2.0 improvements.
Goal 10. By 2031 increase tree canopy in the Portside Community to 35%.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the SDAPCD, City of San Diego, National City and stakeholders from increasing the tree canopy of Portside Communities. The proposed project is not anticipated to remove any mature trees.
Goal 11. Develop a new vision for park/green space for the Portside Community to increase park space by 30% by December 2022.	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the SDAPCD, City of San Diego, National City and stakeholders from increasing park space for Portside Communities.
Heavy Duty Truck Strategies	
Action E1: Advance the deployment of heavy-duty on-road electric trucks to demonstrate operational feasibility and reduce emissions within the Portside Community and other disadvantaged communities.	**Not Applicable.** The proposed project would not be inconsistent with or obstruct any actions to advance the deployment of on-road electric trucks to demonstrate feasibility.
Action E3: Support dedicated truck route and avoid truck impacts to local community	**Consistent.** Trucks over five (5) tons are required to follow the designated Truck Route along Harbor Drive to access north or southbound Interstate 5 or northbound Interstate 15, as adopted 10/31/2018 by the City of San Diego Resolution R-2019-249. The designated truck route, including enforcement of compliance with applicable requirements, is within the jurisdiction and control of the City of San Diego, not the District. Nonetheless, the proposed project requires the issuance of a Coastal Development Permit which has been conditioned, as all projects located along the working waterfront, to require the use of the City of San Diego's designated Truck Route to further emphasize and improve compliance with the designated trucking route.
Action E4: Increase number of truck parking and staging facilities with electric charging capabilities to address regional parking needs and alleviate the truck parking burdens within the Portside Community.	**Not Applicable.** The proposed project would not result in any changes in available parking and would not increase operational truck trips.
Land Use Strategies	
Action F3: Urban Greening	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct City of National City, City of San Diego, SANDAG, U.S. Navy, Port of San Diego, Caltrans or the Barrio Logan Community Planning Group from promoting programs, projects, and funding opportunities to increase urban greening efforts.
Action F5: Support Harbor Drive Multimodal Corridor Study (HDMCS) Land Use Proposals	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct the City of San Diego, Port of San Diego or the City of National

Goals and Strategies	Proposed Project Consistency
	City from supporting the Harbor Drive Multimodal Corridor Study Land Use Proposals.
Action F7: Improve Transportation Efficiencies	**Not Applicable.** The proposed project is not inconsistent with and does not obstruct SDAPCD, SANDAG, Naval Base San Diego, Port of San Diego, City of San Diego, City of National City, and Caltrans from working with regional and local transportation agencies to improve transportation efficiencies.
Working Waterfront Activities (Port, Navy, and Shipyards)	
Action G2: Reduce Emissions from Ships at Berth	**Consistent.** When vessels berth or dock at NASSCO for repairs, upgrades and maintenance, their engines are turned off and the vessels are connected to shore power. Furthermore, the proposed project would include installation of new diesel generators on the new dry dock that would be U.S. EPA Tier 4-rated and would be outfitted with a closed-loop cooling water system. The new floating dry dock would be outfitted with an extensive electrical distribution system in an effort to reduce the quantity of temporary diesel air compressors utilized for production operations, as well as a modern electric salt water pumping system to minimize the need for portable diesel salt water pumps. The proposed project is not inconsistent with and does not obstruct the Port from advancing implementation of shore power infrastructure and/or alternative technology to reduce ocean-going vessel emissions.
Action G3: Reduce emissions from harbor craft	**Consistent.** The proposed project would result in the reduction of emissions from harbor craft during operations, compared to existing conditions. Specifically, the new Lot 20 position would reduce the distance of tugboat trips because the floating dry dock would no longer need to be repositioned farther away from the home position within the NASSCO leasehold during vessel launches.
Action G4: Reduce DPM and NOx emissions from portable air compressors and other diesel sources at shipyards.	**Consistent.** The proposed project would result in the reduction of emissions from diesel sources during operations, compared to existing conditions. Specifically, the proposed project would include installation of new diesel generators that would be U.S. EPA Tier 4-rated and would be outfitted with a closed-loop cooling water system, which would replace the Tier 0 generators used on the existing floating dry dock. The new floating dry dock would be outfitted with an extensive electrical distribution system in an effort to reduce the quantity of temporary diesel air compressors utilized for production operations, as well as a modern electric salt water pumping system to minimize the need for portable diesel salt water pumps. Furthermore, the use of off-road equipment with Tier 4 engines during

Goals and Strategies	Proposed Project Consistency
	project construction would be required as project conditions of approval to reduce construction-related emissions.
Action G5: Promote best practices for reducing diesel, VOC and other emissions from ship repair activities.	**Consistent.** See the consistency analysis for Action G2 and G4 above. The proposed project would result in the reduction of emissions from harbor craft and diesel sources during ship repair activities, compared to existing conditions.
Action G6: Reduce emissions from shipyard employee transportation	**Consistent.** As discussed in Section 4.17, "Transportation," no new vehicle trips would be generated during operation of the project. Additionally, NASSCO provides subsidized vanpool, discounted trolley passes, and employee bike lockers. On-premises transportation is also aided by over 150 electrics carts and more than 200 electric bikes. Therefore, the proposed project would not affect emissions from shipyard employee transportation.
Action G7: Promote adoption of ZE technologies by Port tenants, truckers, and other users of equipment	**Consistent.** As discussed above, the proposed project would result in the reduction of operational emissions from harbor craft and diesel sources during ship repair activities, compared to existing conditions. In addition, although the proposed project would not exceed a significance threshold for criteria pollutants or toxic air contaminants, the use of off-road equipment with Tier 4 engines during project construction would be required as a project condition. The proposed project would not be inconsistent with the ability of the Port to promote the adoption of ZE technologies when these technologies become feasible and available.
Advocacy Measures	
Action H1: Support Emission Reduction Opportunities Some measures require a commitment by an agency that cannot be made until after a public process and/or after May 2021 when the CERP will be finalized. The only action the APCD and/or Steering Committee can take is to support an outcome that will improve air quality in Portside, all disadvantaged communities, or the region.	**Consistent.** As discussed above, the proposed project would result in the reduction of operational emissions from harbor craft and diesel sources during ship repair activities, compared to existing conditions. In addition, although the proposed project would not exceed a significance threshold for criteria pollutants or toxic air contaminants, the use of off-road equipment with Tier 4 engines during project construction would be required as a project condition. The proposed project would not be inconsistent with or obstruct the District's ability to support emission reduction opportunities intended to improve air quality.

Source: SDAPCD 2021b

The proposed project would be consistent with current land use designations of the PMP and would not result in changes in land use or an increase in population. Additionally, the proposed project would not conflict with the applicable goals, objectives, and strategies of the MCAS and CERP. In summary, the floating dry dock would no longer need to be relocated to another berth farther from the home dock during vessel launches from the inclined building ways or building dock. Rather, the floating dry dock would be repositioned to the "Lot 20" temporary location, which is closer to the home position.

As such, the proposed project would result in reduced fuel use associated with tug trips during operations that would improve air quality and reduce TACs, when compared to existing conditions. In addition, the new diesel generators would be U.S. EPA Tier 4-rated and would be outfitted with a closed-loop cooling water system. The new floating dry dock would be outfitted with an extensive electrical distribution system in an effort to reduce the quantity of temporary diesel air compressors utilized for production operations, as well as a modern electric saltwater pumping system to minimize the need for portable diesel saltwater pumps. Therefore, the proposed project would reduce emissions from stationary sources during operations, when compared to existing conditions.

As such, the proposed project would be accounted for within SDAPCD's attainment forecasts and RAQS formulation. The project would not conflict with or obstruct the implementation of the applicable air quality plan. Therefore, the impact related to project implementation conflicting with obstructing implementation of an applicable air quality plan is considered less than significant, and no mitigation is required.

Level of Significance Prior to Mitigation

Implementation of the proposed project would not conflict with or obstruct implementation of the applicable air quality plans. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Threshold 2: Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

Impact Discussion

As a result of past and present projects, the SDAB is currently in nonattainment for O_3 under NAAQS and for O_3, PM_{10}, and $PM_{2.5}$ under CAAQS, and will likely be further impeded by reasonably foreseeable future projects (see Chapter 5, *Cumulative Impacts*). Construction and operation of the proposed project have the potential to result in cumulatively considerable net increase of O_3 precursors (ROG and NO_X), PM_{10}, and $PM_{2.5}$. The construction- and operations-related air quality impacts are discussed below.

Construction Emissions

An estimate of emissions associated with project construction was calculated using the methods discussed above in Section 3.1.4.1, *Methodology*. Maximum daily emissions (pounds per day) for each phase and each year of construction are presented in Table 3.1-10. Additionally, as a project feature, the project applicant would ensure at least 75 percent of off-road diesel construction equipment (greater than 50 horsepower) would meet Tier 4 (final) California Emissions Standards for off-road diesel engines. This would also be made a condition of the CDP. However, for purposes

of analysis, the air emissions reductions associated with this project feature have not been included in the air emission calculations presented in Table 3.1-10.

Table 3.1-10 Estimate of Peak Day Construction Emissions by Year (pounds per day)

Phase	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$	SOx
Maximum Daily by Phase (and year of Maximum Phase)						
Floating Dry Dock Replacement and Modification - Lot 20 *(2024)*	9.1	49.7	37.9	2.4	2.0	<0.1
Floating Dry Dock Replacement and Modification - Dry Dock Infrastructure *(2024)*	9.1	49.7	37.9	2.4	2.0	<0.1
Repair Complex Wharf Improvements *(2025)*	9.1	48.4	37.6	2.4	1.9	<0.1
Quay Wall Revetment Repairs (Berths 2-5) *(2025)*	9.1	50.3	38.3	2.7	2.1	<0.1
As-needed Quay Wall Revetment Repairs *(2026)*	9.0	49.2	38.0	2.7	2.0	<0.1
Structural Pile Repair and Replacement *(2025)*	9.1	48.5	37.6	2.4	2.0	<0.1
Mobilization/Demobilization (2024)	5.9	7.6	16.1	0.6	0.5	<0.1
Maximum Daily by Year						
2024	15.0	57.3	54.0	3.0	2.4	<0.1
2025	33.1	154.8	129.5	8.1	6.4	0.1
2026	32.9	151.5	128.6	7.9	6.3	0.1
2027	23.8	102.8	91.3	5.6	4.3	0.1
2028	23.7	100.9	91.2	5.5	4.3	0.1
2029	14.8	53.1	53.2	2.8	2.3	<0.1
2030	14.7	52.4	53.1	2.8	2.3	<0.1
2031	14.7	51.9	53.0	2.8	2.3	<0.1
2032	14.7	51.4	52.9	2.8	2.2	<0.1
2033	14.6	50.8	52.9	2.7	2.2	<0.1
2034	14.6	50.4	52.8	2.7	2.2	<0.1
Maximum Overall	**33.1**	**154.8**	**129.5**	**8.1**	**6.4**	**0.1**
Significance Threshold	75	250	550	100	55	250
Exceed Threshold?	No	No	No	No	No	No

Source: Modeling by Ascent Environmental 2023

Notes: Emissions may not add up due to rounding. Emission estimates do not account for Tier 4 (final) equipment, which will be made a condition of the CDP.

As shown in Table 3.1-10, construction of the proposed project would result in emissions below applicable significance thresholds. Therefore, construction-related criteria pollutant emissions would not exceed significance thresholds for pollutants for which the region is nonattainment under the NAAQS or CAAQS.

Operational Emissions

As discussed in Section 3.1.4.1, the proposed project would not change the nature or extent of existing operations at the project site. The project would not increase shipbuilding and repair

operations and would not increase activity at the project site. Moreover, the project would improve the efficiency of NASSCO's shipbuilding operations and reduce the hours tugboats operate because of the more efficient operating conditions associated with use of the proposed Lot 20 location for the temporary position of the floating dry dock and easier positioning during vessel launches. This reduction in tugboat hours would reduce emissions and fuel consumption from tugboats. However, because the exact extent of these changes is not known, the emissions benefit associated with this reduction in tugboat hours cannot be quantified.

The Repair Complex Wharf is sited within the facility which is predominantly allocated to support ship repair operations. The new Repair Complex Wharf size and configuration would allow for the centralization of materials needed to support ship repair within this area as opposed to other areas throughout the facility. This is anticipated to reduce forklift and truck activity within the facility and reduce the amount of time equipment is in transit.

Because the project would improve efficiencies, the project would result in an emissions benefit. Operational impacts would be less than significant, and no mitigation is required.

Level of Significance Prior to Mitigation

Neither construction nor operation of the proposed project would result in cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Threshold 3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact Discussion

Toxic Air Contaminants

CARB has formally identified over 200 substances and groups of substances as TACs. DPM, is the primary TAC of concern in urban areas. Diesel-powered construction equipment as well as heavy-duty truck movement and hauling both on and off site would emit DPM that could potentially expose nearby sensitive receptors to pollutant concentrations. For purposes of analysis, diesel PM_{10} exhaust emissions presented in this analysis are used as a surrogate for DPM, consistent with OEHHA guidance (2015).

The project is located in a primarily industrial area that borders San Diego Bay to the west, the communities of Logan Heights and Barrio Logan to the north and northeast, and Cesar Chavez and Chicano Parks to the northwest. The nearest sensitive receptors within the City of San Diego include residents in the Barrio Logan community, just across Harbor Drive and the BNSF rail line north of

the project site. The closest residence is located on the north side of Main Street just west of South 27th Street, approximately 1,180 feet north of the nearest project site boundary. The nearest school, the Logan Memorial Educational Campus, bordered on the south by Logan Avenue between South 28th and South 29th Streets, is located approximately 3,010 feet north of the project site. The nearest residential areas in the City of Coronado are located across San Diego Bay, approximately 1.4 miles west of the project site and are not discussed further due to their distance from the site.

Construction

Construction activities would occur over an approximately 10-year period. Project construction would generate TAC emissions associated with equipment, harbor craft, trucks, and welding activities. resulting in the exposure of nearby existing sensitive receptors (e.g., residences, schools, and parks) to increased TAC concentrations. As such, modeling was conducted to evaluate the associated health risk from TAC exposure during construction. The methodology describing the HRA modeling approach is shown in Section 3.1.4.1 above.

In addition, as a project feature, at least 75 percent of off-road diesel construction equipment (greater than 50 horsepower) would meet Tier 4 (final) California Emissions Standards for off-road diesel engines. This would also be made a condition of the CDP. However, for purposes of analysis, the air emissions reductions associated with this project feature have not been included in the health risk modeling as summarized in Table 3.1-11. Health risk estimates shown in Table 3.1-11 account for fleet-average emission factors. Use of Tier 4 (final) equipment, which will be a condition of the CDP, DPM emissions and associated health risk from equipment would substantially reduce numbers shown here.

Cancer risk as well as chronic and acute non-cancer hazard index at nearby homes, schools, and parks are summarized in Table 3.1-11. The risk values represent the sum of exposure from DPM as well as TACs from welding. The cancer risk from welding is minor (approximately 0.01 per million at the MICR); thus, the cancer risk estimate is predominately associated with DPM from diesel equipment, harbor craft, and trucks. As shown, the cancer risk posed to nearby sensitive receptors from project construction would not exceed SDAPCD's MICR threshold of 10 chances in one million. In addition, the project would not result in TAC emission that would result in chronic and acute non-cancer hazard levels that exceed 1.0. The chronic and acute non-cancer hazard effects from welding are minor and far below the numerical threshold level. Therefore, implementation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations and associated health risk.

Table 3.1-11 Estimate of Health Risk During Construction

Receptor Type	Cancer	Chronic Hazard	Acute Hazard
Residential	7.98	<0.1	<0.1
Park	0.08	<0.1	<0.1
School	1.76	<0.1	<0.1
Threshold Level	10	1.0	1.0
Exceed Threshold?	No	No	No

Source: Modeling by Ascent Environmental 2023

Notes: Emissions may not add up due to rounding. Emission estimates do not account for Tier 4 (final) equipment, which will be made a condition of the CDP.

Operation

Once the proposed project is operational, existing TAC emissions would continue to result primarily from the continuation of existing operations which use diesel-powered tugs and equipment, and industrial-type processes for ship repair such as abrasive blasting, application of marine coatings, and welding. As discussed above, the nature and extent of ship repair processes are not expected to change due to implementation of the proposed project. As such, TAC emissions are not expected to change, and impacts from the emission of TACs would be less than significant, and no mitigation is required.

Carbon Monoxide Hotspots

CO hotspot analyses address the implications of high short-term concentrations of CO, which typically occur at locations with high traffic volumes and congestion. For this reason, hotspots are often correlated with LOS at intersections. Due to the short-term and temporary nature of construction activities, CO emissions generated during construction of the proposed project are not anticipated to result in long-term CO hotspot impacts. Also, as mentioned previously, and discussed in further detail in Section 3.9, *Transportation, Circulation, and Parking,* subsection 3.9.2.1, operation of the proposed project is not anticipated to change the daily number of employees that access the NASSCO facilities, nor are they anticipated to increase the number of deliveries, vendors, or other services to the facility. Consequently, the impact of traffic conditions from the proposed project on ambient CO levels is considered less than significant, and no mitigation is required.

Criteria Air Pollutants

High levels of criteria pollutants are associated with some form of health risk (e.g., asthma, asphyxiation). Adverse health effects associated with criteria pollutant emissions 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]). Moreover, O_3 precursors (ROG and NO_X) affect air quality on a regional scale. Health effects related to O_3 are therefore the product of emissions generated by numerous sources throughout a region.

As part of the setting and updating of the NAAQS, EPA develops and considers quantitative characterizations of exposures and associated risks to human health or the environment, known as a Health Risk and Exposure Assessment (HREA), associated with recent air quality conditions and with air quality estimated to just meet the current or alternative standard(s) under consideration (EPA 2016). The HREA estimates population exposure to and resulting mortality and morbidity health risks associated with the full range of observed pollutant concentrations, as well as incremental changes in exposures and risks associated with ambient air quality adjusted to just meeting the existing NAAQS and just meeting potential alternative NAAQS under consideration (EPA 2014).

In terms of analyzing project-related emission, the air quality thresholds applied to the proposed project (see Table 3.1-7) 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 VOC 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, PM_{10}, 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 Table 3.1-10, construction of the proposed project would result in emissions of criteria air pollutants that would be below significance thresholds. Because these thresholds (see Table 3.1-7) serve as health-based thresholds, construction and operation of the proposed project would not result in adverse health effects associated with criteria pollutant emissions.

Moreover, construction and operation of the proposed project would not result in adverse health effects on the nearby populations associated with localized PM exhaust and CO, as implementation of the proposed project would result in emissions of localized pollutants (CO, PM_{10}, and $PM_{2.5}$) far below thresholds. Consequently, the health-related impacts of the proposed project's localized criteria air pollutant emissions are considered less than significant, and no mitigation is required.

Asbestos-Containing Materials

Demolition of existing structures results in fugitive dust and other particulates that may disperse to adjacent sensitive receptor locations. Asbestos-containing materials (ACMs) were commonly used as fireproofing and insulating agents prior the 1977, which is when the U.S. Consumer Product Safety Commission banned most ACM use due to their link to mesothelioma. Any buildings constructed prior to 1977 that would be demolished may have used ACM and could expose receptors to asbestos, which may become airborne with other particulates during demolition. However, the proposed project does not propose to demolish any structures that were built prior to 1977. Therefore, no impact related to asbestos-containing materials would occur.

Level of Significance Prior to Mitigation

Neither construction nor operation of the proposed project would expose sensitive receptors to substantial pollutant concentrations. 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: Would the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact Discussion

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 2005). 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.

Potential odor emitters during construction activities include diesel exhaust, asphalt paving, and architectural coatings. 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. The project does not propose any change in the nature and extent of potential odor emitters during operations, including exhaust from vehicles, offroad equipment, and vessel activity. In addition, because operational activity as a whole (including labor, vessel calls, and overall tug activity) would decrease, odor impacts are not expected to exceed existing odor conditions. Odor-related impacts would be less than significant, and no mitigation is required.

Level of Significance Prior to Mitigation

Implementation of the proposed project would not result in other emissions such as those leading to odors that would adversely affect a substantial number of people. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

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Section 3.2
Biological Resources

3.2.1 Overview

This section describes the existing conditions and applicable laws, regulations, and policies for biological resources. The section also analyzes the proposed project's potential to impact biological resources during construction and operation. Impacts on biological resources are considered significant if the proposed project would: (1) have a substantial adverse effect on candidate, sensitive, or special-status species; (2) have a substantial adverse effect on riparian habitat or other sensitive natural community; (3) result in substantial interference with the movement of 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; or (4) 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.

The environmental setting and project impact analysis for marine biological resources provided below is based on two project-specific technical reports. The *Marine Habitat Assessment for the General Dynamics-NASSCO Floating Dry Dock Replacement and Waterfront Improvement Project*, prepared by Marine Taxonomic Services (March 2023), is included as Appendix E. In addition, The *Port of San Diego NASSCO Floating Drydock and Waterfront Improvement Project Underwater Assessment*, prepared by Illingworth and Rodkin (February 2022) is included as Appendix F. In addition, a California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants review was performed by Ascent Environmental and the results are included as Appendix G.

As discussed in Section 3.2.4.3, *Project Impacts and Mitigation Measures*, all impacts related to biological resources would be less than significant after mitigation is incorporated.

3.2.2 Existing Conditions

3.2.2.1 Terrestrial Environment

The terrestrial portion of the project site is completely developed and contains no natural habitat, natural vegetation, or landscape vegetation. The project site is situated in a highly industrialized area on and adjacent to the San Diego Bay.

3.2.2.2 Marine Environment

Marine habitats on the project site were surveyed and characterized in May of 2021 using side-scan sonar surveys and SCUBA-based transect surveys (Appendix E). The natural and human-made habitats observed and surveyed within the project site included intertidal and subtidal hard bottom, intertidal and subtidal piles, subtidal unvegetated soft bottom, subtidal vegetated soft bottom, and open water habitats. These marine habitats are discussed below.

Hard Bottom Habitat

Hard bottom habitats observed throughout the project site were generally present along the shallow water edges of survey sites and consisted of items used for the purpose of armoring the shoreline. Hard bottom substrate was generally composed of varying and on occasion multiple types of hard material including riprap rock, stacked concrete blocks, and concrete poured over stacked concrete block. Organisms observed over and within hard bottom habitats included marine invertebrates, marine fishes, and several species of marine algae. Hard bottom habitat is present along the shoreline generally in intertidal and shallow subtidal areas, and with some hard debris items below -12 feet mean lower low water (MLLW) (Appendix E).

Piles

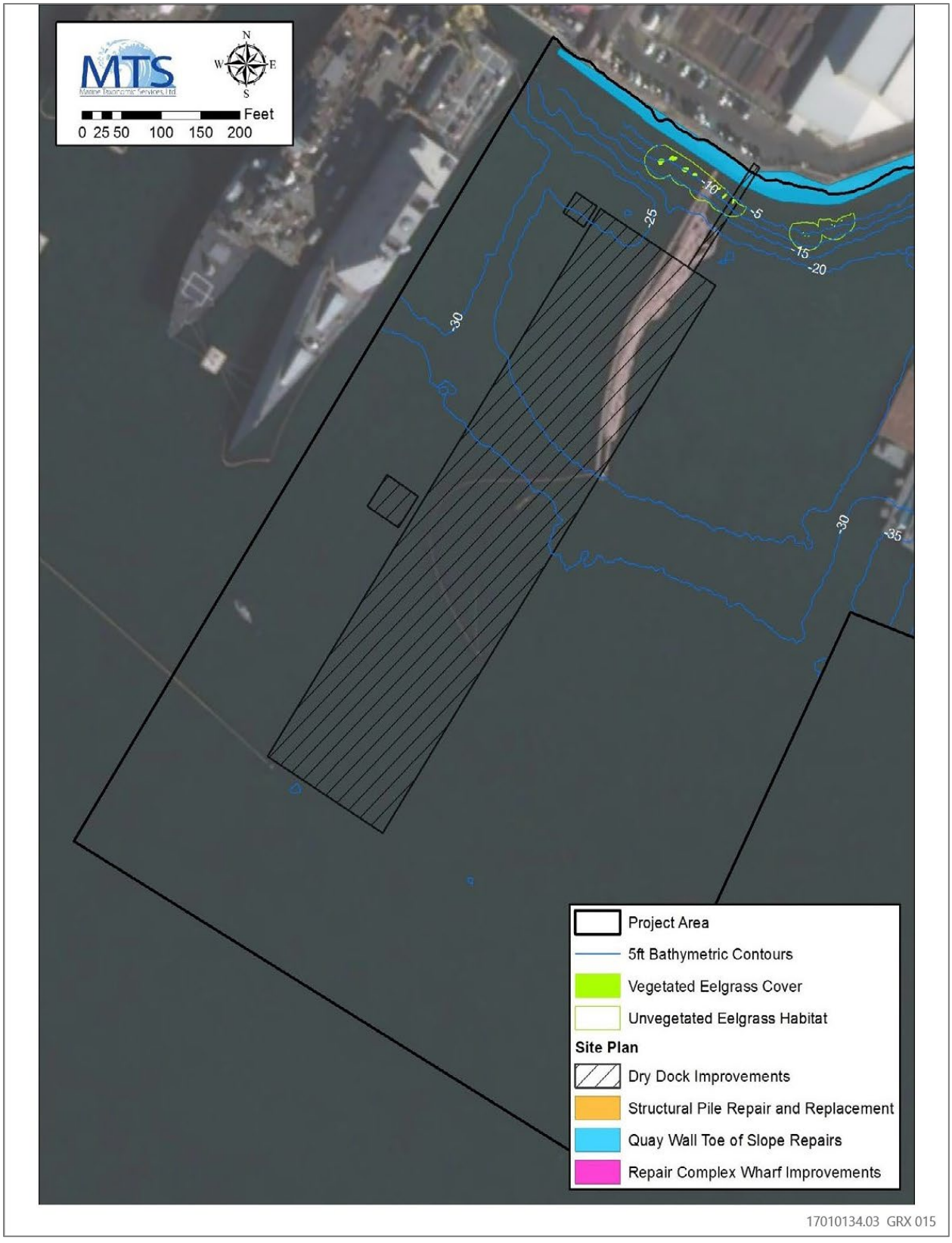
Piles are present throughout the project site that support overwater structures of the NASSCO facility. The upper reaches of the piles (i.e., 2 to -2 feet MLLW) were generally colonized by a fouling community dominated by Pacific oysters (*Crassostrea gigas*), barnacles (*Chthamalus* spp.), and foliose species of red algae (*Gelidium* sp., *Gracilaria* sp.) (Appendix E). Fish were not observed around the piles, however, marine fish species observed elsewhere in the project site may utilize these structures on occasion.

Unvegetated Soft Bottom Habitat

Most of the marine habitat within the project site was unvegetated soft bottom habitat. Unvegetated soft bottom habitat was generally characterized by sediment grain size of mud to fine sand and shell hash. Bioturbation (i.e., the disturbance of sedimentary deposits by living organisms) was generally low throughout all soft bottom habitats. In portions of deep subtidal unvegetated habitat moderate bioturbation was observed due to reduced coarseness of sediment and reduced presence of shell hash and shells. Organisms observed within unvegetated soft bottom habitats included marine invertebrates, marine fishes, stingrays, and sparse marine algae (Appendix E).

Vegetated Soft Bottom Habitat

Vegetated soft bottom (i.e., eelgrass [*Zostera marina*]) occurs within portions of the project site. Eelgrass covers approximately 5,150 square feet and unvegetated eelgrass habitat (i.e., areas within approximately 16 feet of established eelgrass habitat where the beneficial aspects of eelgrass presence extend and influence benthic communities) covers approximately 0.7 acre within the project site (Appendix E). Eelgrass is typically present in shallow subtidal habitats in the project site but is occasionally present in intertidal and moderately deep subtidal habitat (Appendix E).

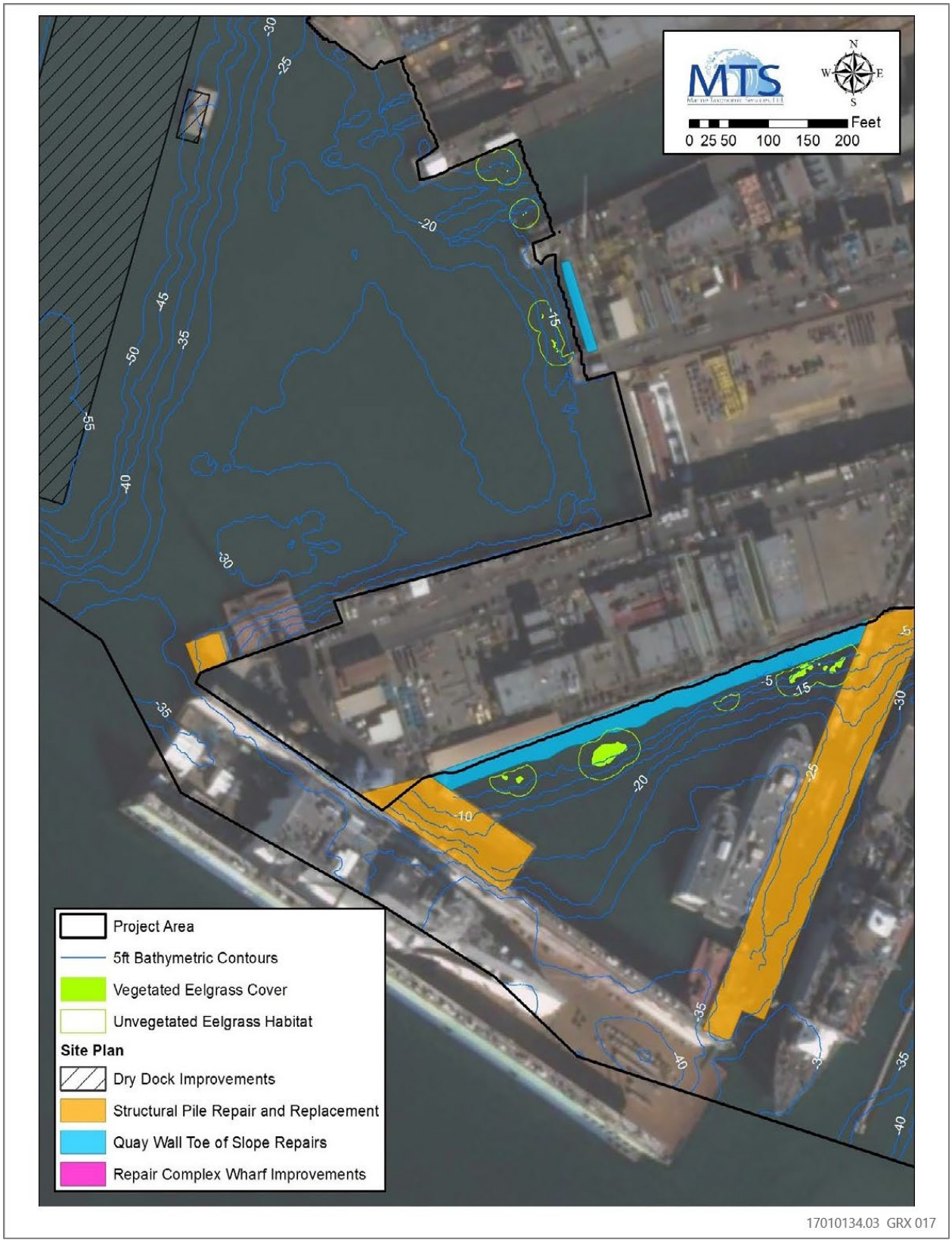


Source: Appendix E.

Figure 3.2-1a Mapped Eelgrass (Sheet 1 of 4)

Source: Appendix E.

Figure 3.2-1b Mapped Eelgrass (Sheet 2 of 4)



Source: Appendix E.

Figure 3.2-1c Mapped Eelgrass (Sheet 3 of 4)

Source: Appendix E.

Figure 3.2-1d Mapped Eelgrass (Sheet 4 of 4)

Open Water Habitat

Topsmelt (*Atherinops affinis*) were observed swimming in open water, and it is likely that schooling baitfish frequent the open waters of the project site, which are important prey items for seabirds (Appendix E).

3.2.2.3 Candidate, Sensitive, and 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), 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 Native Plant Society's (CNPS) Rare Plant Ranking System. Sensitive species also include species listed by local or regional jurisdictions.

A query of the California Natural Diversity Database and a California Native Plant Society Inventory of Rare and Endangered Plants search of the La Jolla, La Mesa, Point Loma, National City, and Imperial Beach USGS 7.5-minute quadrangles were conducted to identify sensitive biological resources within the vicinity of the project site. A review of the query and search results, documented species ranges, and habitat within the project site identified no special-status plant species that may occur on the project site due to lack of suitable natural habitat (Appendix G; CNDDB 2021; CNPS 2021). A total of 14 special-status wildlife species were indicated as possibly occurring on the project site: American peregrine falcon (*Falco peregrinus anatum*), black skimmer (*Rynchops niger*), brant (*Branta bernicla*), California brown pelican (*Pelecanus occidentalis californicus*), California least tern (*Sternula antillarum browni*), common loon (*Gavia immer*), gull-billed tern (*Gelochelidon nilotica*), green sea turtle (*Chelonia mydas*), harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus*), bottlenose dolphin (*Tursiops truncatus*), long-beaked common dolphin (*Delphinus capensis*), short-beaked common dolphin (*Delphinus delphis*), and California gray whale (*Eschrichtius robustus*), (Appendix G; CNDDB 2021). Specific details of birds, turtles, and marine mammals with the potential to occur onsite or in the vicinity are described below.

Birds

American peregrine falcon

Although it was noted above in Section 3.2.2.1 that the terrestrial portion of the project site is completely developed and contains no natural habitat, natural vegetation, or landscape vegetation, there is the potential for occurrence of this "upland" species. American peregrine falcon (*Falco peregrinus anatum*) and some of the prey species it typically pursues, are well-adapted to urban environments. The American peregrine falcon is known to nest on tall buildings and could utilize the project site for foraging in the event that prey species are present. There is low potential for occurrence of American peregrine falcon at the project site due to the heavily industrialized nature of the site. However, occurrence is possible given their use of urban areas.

Black Skimmer

Black skimmer (*Rynchops niger*) breed 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. In San Diego Bay, the salt works of south San Diego Bay have become a major colony with hundreds of nesting pairs (Shuford and Gardali 2008). Black skimmer forage by flying over calm water with their lower beak skimming the water. When a fish touches the lower beak, the beak is closed to capture the fish. Given the lack of suitable nesting habitat and the general lack of calm water at the facility, there is low potential for this species to utilize space within the facility for foraging.

Brant

Brant (*Branta bernicla*) breed and nest in the northern territories of Canada and Alaska. They migrate to southern latitudes along the east and west coasts of North America in the winter where they remain until late spring (Audubon 2023). Brant consumes plant material including green algae, sedges, grasses, pondweed, widgeon grass, and eelgrass. Eelgrass is a favored forage item and they feed on eelgrass and other aquatic vegetation either on foot in shallow water or tidal flats or by wading and tipping up in shallow water (Audubon 2023). Brant are one of the most numerous waterfowl species observed in San Diego Bay in the winter and spring with the highest numbers observed in areas such as the D-Street Fill, Chula Vista Wildlife Reserve, and the north shore of the Salt Ponds (U.S. Navy and Port of San Diego 2018). Because of the abundance of Brandt in San Diego Bay and the presence of eelgrass, there is moderate potential for Brandt to occur within the project area. Although they are more likely to utilize other portions of south San Diego Bay with more quiescent waters and abundant eelgrass, they may occasionally occur in the project area.

California Brown Pelican

California brown pelican (*Pelcanus occidentalis californicus)* do not nest in San Diego Bay. Their nesting sites occur on islands within the Channel Islands offshore of California, California brown pelican do forage within the bay and there is moderate potential for this species to utilize areas of open water within the Project site to forage for fish.

Like the California least tern, available space for California Brown Pelican nesting does not occur within the project site. The species forages on sandy shorelines and mudflats at low tide. Because there is minimal suitable foraging habitat exposed at any given tide, there is low potential for this species to utilize space within the facility for foraging.

California Least Tern

As discussed in Appendix E, available space for nesting California least terns (*Sterna antillarum browni*) does not occur within the project site. Foraging within the project site by California least terns would only occur during their nesting season when they are present in San Diego Bay. The nesting season is generally recognized as occurring between April 15 and September 15; however, the actual nesting season is the time between the arrival and departure of California least terns relative to nesting sites. Because of the proximality of the facility relative to known nesting colonies, 2there is moderate potential for least terns to utilize areas of open water within the project site to actively forage for fish when they are present during the nesting season.

Common Loon

Common loon (*Gavia immer*) breed in portions of the northernmost lower United States and extending into Canada and Alaska. They migrate and overwinter along both coasts of the United States and Canada extending south to the east and west coasts of Mexico (Audubon 2023). Common

loon mostly feed on small fish but also eat crustaceans, mollusks, aquatic insects, and frogs. They may also sometimes feed on aquatic plants. They forage by diving and swimming underwater (Audubon 2023). Common loon occur in San Diego Bay between October and June and are most prevalent November through March; they have been observed in all regions of San Diego Bay (U.S. Navy and Port District 2018). Common loon have a moderate to high potential to occur in the project area. Although they are not found in high numbers like brandt, they are widespread and their primary prey items (small fish) occur in large schools throughout San Diego Bay.

Gull-billed Tern

Gull-billed tern (*Gelochelidon nilotica*) 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). Similar to California least tern, they are not year-round residents; they migrate to southern California and Mexico nest colonies where they generally occur between March and August (Center for Biological Diversity 2023). The species is threatened by loss and degradation of the suitable nesting habitat. In San Diego Bay, the salt works of south San Diego Bay is the only nesting site for this species in San Diego County (Unitt 2012). Unlike California least tern, gull-billed tern are opportunistic predators and hunt on land and water for insects, crabs, lizards, fish, and chicks. Given the location of nesting colonies and their general feeding habits, they have low potential to occur within the facility.

Turtles

The Eastern Pacific green sea turtle has been documented in San Diego Bay dating back to the 1800s (Stinson 1984). Green sea turtles in San Diego 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 the Sweetwater River (Madrak et al. 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 are part of the Mexican breeding population. The nesting sites for the green sea turtle foraging population may include the Revillagigedo Islands, Tres Maria Islands, and mainland Mexico (Appendix E). Turtles have been tracked between the south Bay and the Revillagiegedo Islands (Madrak et al. 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.

There is moderate potential for green sea turtle presence at the project site due to the facility's central location within San Diego Bay. Other sea turtle species have not been observed in San Diego Bay thus it is unlikely for them to be observed within the project site.

Pinnipeds

California Sea Lion and Pacific Harbor Seal

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 man-made structures (e.g., docks, buoys, landings, breakwaters, boats, 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 man-made structures, 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 due, in part, to their physiology. 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 (Appendix E). 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 San Diego Bay. In addition to the animals that haul out on the buoys, docks, and boats, California sea lion rests in moderate numbers on the rock riprap that forms Zuniga Jetty at the entrance to San Diego Bay (Appendix E). 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 nearest 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 (Appendix E).

While the project site is located further from the San Diego Bay entrance and the established natural haul out sites there is potential for these species to travel further into the bay in search of anthropogenic haul out areas and foraging for food. There is potential for California sea lions and harbor seals to transit within the open waters of the project site and utilize structures within the NASSCO leasehold as haul out sites. Given the overall rarity of sightings of other pinniped species in north San Diego Bay, all other pinniped species are considered to be unlikely to occur within the project site and its immediate surroundings.

Other Pinnipeds

Other pinnipeds seen in the bay include northern elephant seal (*Mirounga angustrirostris*) and Steller sea lion (*Eumetopias jubatus*). These are rare sightings and, in the case of the 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 north bay (Appendix E). The potential occurrence of any other pinniped species within the project site is low to none.

Cetaceans

Dolphins

Common and bottlenose dolphins have widespread distributions and are commonly observed in southern California nearshore environments. They are also often observed in the north San Diego Bay area from the San Diego Bay entrance to approximately Harbor Island (Appendix E). These animals are often observed either swimming alongshore or bow-riding vessels entering and leaving the bay. Due to the location of the project site, further south and away from the San Diego Bay entrance, the potential for the occurrence of these species is low.

California Gray Whale

The California gray whale (*Eschrichtius robustus*) can be observed migrating along the California coast. The California gray whale performs annual migrations from cooler northern Pacific feeding areas to embayments in Baja California, Mexico for mating and caving. California gray whales migrate south through San Diego coastal waters 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 (Appendix E); these events are likely accidental and are rare. Should animals enter San Diego Bay there is very low potential for them to travel as far south as the project site.

Essential Fish Habitat

To adequately address Essential Fish Habitat (EFH) within the study area, fish species managed by the Pacific Fishery Management Council (PFMC) that are known to either occur within the study area, have historically occurred within the study area, or depend upon those marine habitats that are known to occur within study area, were identified. In all, 28 species managed by the PFMC were identified, including species managed under the Coastal Pelagic Species Fishery Management Plan (FMP), the Highly Migratory Species FMP, and the Pacific Groundfish FMP (See Table 3 of Appendix E).

In addition, Habitat Areas of Particular Concern (HAPC) were observed within the project site. HAPCs are a discreet subset of EFH, that are distinguished by characteristics including their high ecological value and vulnerability to anthropogenic stressors. As indicated in Appendix E, a review of mapping NMFS mapping data for pacific Coast HAPCs, and confirmation obtained from side-scan sonar and visual SCUBA survey observation, 478 square meters of eelgrass (*Zostera marina*), seagrass habitat, were identified within the project site and is classified as a HAPC (See Figure 3.2-1a through 3.2-1d).

3.2.3 Applicable Laws, Regulations, Plans, and Policies

3.2.3.1 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 (CCC) 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.

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 is 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 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 WoUS) that is required. Section 10 applies when a federally listed species is present but no federal nexus is present.

Magnuson-Stevens Fishery Management Conservation Act of 1976, as amended 1996 (Public Law 104-267)

Federal agencies must consult with NMFS on actions that may adversely affect EFH, which is defined as those "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." NMFS 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 of 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, breading, 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. 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 Migratory Bird Treaty Act (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. Permits are available under the MBTA through USFWS, and authorization for potential take under the MBTA is addressed as part of the ESA Section 7 consultation process. The proposed project must be analyzed to ensure consistency with the MBTA, including avoidance of take of nesting birds, their eggs, or activities that may cause nest failure. This applies for both terrestrial and marine migratory species protected under the MBTA that may be directly or indirectly affected by the proposed project. Any potential take must be either permitted through consultation with USFWS or avoided and minimized through mitigation measures.

Clean Water Act

The Federal Water Pollution Control Act Amendments of 1972, commonly known as the CWA (33 United States Code 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 303** requires states to develop water quality standards for inland surface and ocean waters and submit them to the U.S. Environmental Protection Agency for approval. Under Section 303(d), the states are required to list waters that do not meet water quality standards and to develop action plans, called total maximum daily loads, to improve water quality.
- **Section 304** provides water quality standards, criteria, and guidelines.
- **Section 401** requires an applicant for any federal permit that proposes an activity that may result in a discharge to WoUS 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 the proposed project if a Section 404 permit and Rivers and Harbor Act (Section 10) permit are required.
- **Section 402** establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredge or fill material) into WoUS. The NPDES program is administered by the RWQCB. Conformance with Section 402 is typically addressed in conjunction with water quality certification under Section 401. All construction activities must be consistent with Section 402 of the CWA and avoid significant water quality-related impacts. See Section 4.5, *Hydrology and Water Quality*, for an analysis related to the proposed project's impacts on water quality.
- **Section 404** provides for issuance of dredge/fill permits by USACE. 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.

Note that all USACE permit projects involving disturbing activities in the San Diego Bay substrates require surveys for Caulerpa spp. (INRMP 2013, page 4-65).

NMFS California Eelgrass Mitigation Policy

The NMFS is an office of the National Oceanic Atmospheric Administration 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.

Caulerpa Control Protocol

In April 2021, NOAA Fisheries was notified of an invasive algae species discovered in Newport Bay, California. The algae, which is native to Florida and other subtropical and tropical locales, is scientifically known as *Caulerpa prolifera*. This is the first positive identification of *Caulerpa prolifera* on the U.S. West Coast and is closely related to the previously eradicated *Caulerpa taxifolia*, which was previously discovered in southern California and determined to be successfully eradicated in 2006.

NOAA Fisheries believes any species of *Caulerpa* that is allowed to establish and spread within coastal areas may adversely impact local fisheries and disrupt seagrass communities important to protected species. It can grow quickly, choking out native seaweed and potentially harming marine life through lost habitat. During the previous *Caulerpa taxifolia* eradication process, the Southern California Caulerpa Action Team (SCCAT) was formed. This team was made up of federal, state, and local governmental agencies, scientists, consultants, and local stakeholders. NOAA Fisheries worked to reactivate the SCCAT and has been collaborating with SCCAT members to quickly identify the extent of the algae's infestation in Newport Bay. The SCCAT believed immediate action should be taken to eradicate the species and developed the Newport Bay Rapid Response Eradication Plan (Eradication Plan). Eradication and survey efforts, consistent with the Eradication Plan, have been initiated and are ongoing.

The SCCAT developed the *Caulerpa* Control Protocol to detect existing infestations and avoid the spread of these invasive species to other systems. NOAA Fisheries and CDFW serve as the lead Federal and State agencies, respectively, for administering the *Caulerpa* Control Protocol. It outlines the certification, survey, and reporting guidelines required when surveying for all Caulerpa species in California nearshore coastal and enclosed bays, estuaries, and harbors from Morro Bay to the U.S./Mexican border. These guidelines apply to any bottom disturbing activities (e.g., pile driving, dredging, etc.) as those have the potential to fragment and spread *Caulerpa*. NOAA Fisheries and CDFW use the *Caulerpa* Control Protocol, in partnership with other resource and permitting agencies, as an important tool for conserving sensitive marine ecosystems, including eelgrass beds and other benthic habitats, and the important functions they provide.

3.2.3.2 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 CCC.

Furthermore, Section 30233 of the California Coastal Act relates to in-water work in open coastal waters, wetlands, estuaries, and lakes. Specifically, diking, filling or dredging is allowed (in accordance with other applicable provisions of the Coastal Act), where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects. Among the types of activities this section is limited to is new or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

California Endangered Species Act

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. In addition, California Fish and Game Code Sections 3511, 4700, 5050, and 5515 prohibit take or possession of fully protected species. For projects that affect both a state- and federally listed species, compliance with the federal ESA will satisfy the CESA if 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). Incidental take of fully protected species may be authorized only under an approved Natural Communities Conservation Plan (NCCP).

California Fish and Game Code

The Fish and Game Code establishes 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 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, as well as setting 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 occur naturally within the state. Section 3503 specifically states that it is

unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, and 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 a 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.

As discussed in Section 4.2.3.1, *Federal*, the CEMP is administered by NMFS and CDFW. The effects of the proposed project on any surrounding eelgrass beds and any compensatory mitigation would be addressed under the CEMP.

Marine Life Protection Act

The Marine Life Protection Act of 1999 directs the state to redesign California's system of marine protected areas (MPAs) to function as a network in order to: increase coherence and effectiveness in protecting the state's marine life and habitats, marine ecosystems, and marine natural heritage, as well as to improve recreational, educational and study opportunities provided by marine ecosystems subject to minimal human disturbance. For the purposes of MPA planning, a public-private partnership commonly referred to as the MLPA Initiative was established, and the state was split into five distinct regions (four coastal and the San Francisco Bay) each of which had its own MPA planning process. All four coastal regions have completed these individual planning processes. As a result, the coastal portion of California's MPA network is now in effect statewide. Options for a planning process in the fifth and final region, the San Francisco Bay, have been developed for consideration at a future date.

Marine Life Management Act

The Marine Life Management Act (MLMA), which became law on January 1, 1999, The MLMA applies not only to fish and shellfish taken by commercial and recreational fishermen, but to all marine wildlife. The MLMA shifts the burden of proof toward demonstrating that fisheries and other activities are sustainable. Greater management authority was delegated to the Fish and Game Commission and the California Department of Fish and Wildlife. Instead of focusing on single fisheries management, the MLMA requires an ecosystem perspective including the whole environment. The MLMA strongly emphasizes science-based management developed with the help of all those interested in California's marine resources.

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 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. A Water Quality Certification or a waiver must be obtained from the RWQCB if an action would potentially result in any impacts on jurisdictional WoS.

3.2.3.3 Local

San Diego Unified Port District Port Master Plan

Through implementation of the Port Master Plan (PMP), the District maintains authority over tidelands and submerged lands conveyed in trust to the District by the California legislature. Any amendments to the PMP are first reviewed and adopted by the Board of Port Commissioners and then certified by the CCC, thereby allowing the District to issue coastal development permits for projects within its jurisdiction. The PMP provides for protection of biological resources and states that the District will remain sensitive to the needs of, and will cooperate with, other communities and other agencies in Bay and tideland development.

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 San Diego Bay INRMP also includes objectives related to the eradication of invasive species in the Bay. Specifically, Objective 4.4.1 calls for the minimization of the harmful ecological, economic, and human health impacts of aquatic invasive species in San Diego Bay. The primary sources of invasive species within San Diego Bay are ballast water and hull fouling (See Section 2.6.7.3 of the INRMP), Table 2-47 of the INRMP lists the invasive marine species found in San Diego Bay.

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.

San Diego Unified Port District Code, Article 10

District Code, Article 10, the District Stormwater Management and Discharge Control Ordinance, prohibits the deposit or discharge of any chemicals or waste to the tidelands or San Diego Bay and makes it unlawful to discharge pollutants directly into non-stormwater or indirectly into the stormwater conveyance system. Article 10 also requires the implementation of best management practices (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. The article 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 for their contributions and/or flows.

3.2.4 Project Impact Analysis

3.2.4.1 Methodology

The analysis of potential impacts on biological resources relied on a combination of previously collected data, literature, and observations made during survey work performed by MTS staff on May 12, 2021. A secondary dive survey was performed on May 20, 2021 to verify sonar data and map eelgrass boundaries within the project site. Data on intertidal habitats, hard bottom habitats, piles, and soft bottom habitats were collected by swimming within the waterside portions of the project site using SCUBA. In addition, side-scan sonar images of the seafloor were collected in shallow and deeper water areas to complete the eelgrass survey within the project site. Data from diver transects were also used to provide validation of side-scan sonar data and generally characterize the habitats within the project site. A full explanation of survey methods and results are provided in Appendix E of this EIR.

The hydroacoustic impact analysis for marine species was carried out as part of the *Port of San Diego NASSCO Floating Drydock and Waterfront Improvement Project – Underwater Assessment* conducted by Illingworth & Rodkin, Inc., for the project. A full explanation of the hydroacoustic analysis methods and results is in Appendix F of this EIR.

3.2.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining the significance of biological resources impacts associated with the proposed project.

Impacts are considered significant if the proposed project 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.

Underwater Noise Criteria

Noise and its potential effects on humans are discussed in Section 3.8, *Noise and Vibration*. However, in addition to the potential effects on humans, noise may also impact wildlife. Activities such as pile driving have the potential to create adverse noise impacts on marine wildlife. Significance criteria related to fish, marine mammals, and green sea turtles are described below.

Fish

On June 12, 2008, NOAA's NMFS, USFWS, California, Oregon, and Washington Departments of Transportation, CDFW, and the U.S. Federal Highway Administration agreed in principle to interim criteria to protect fish from pile driving activities (Table 3.2-1).

Table 3.2-1. Fish Impact Criteria

Interim Criteria for Injury	Sound Levels Agreed in Principle
Peak	206 dB (for all size of fish)
Cumulative Sound Exposure Level (SEL)	187 dB for fish size of 2 grams or greater 183 dB for fish size of less than 2 grams

The adopted criteria listed in Table 3.2-1 are for pulse-type sounds (e.g., pile driving) and do not address sound from vibratory driving. The Sound Exposure Level (SEL) criteria are not applied to vibratory driving sounds.

Marine Mammals

Table 3.2-2 below outlines the current adopted Level A and Level B criteria (see Marine Mammal Protection Act of 1972 in Section 4.3.3.1). The U.S. Navy has conducted ambient underwater sound measurements within the Bay that characterize the sound environment at 129.2 dB (NAVFAC SW 2020). For continuous sounds, NMFS Northwest Region has provided guidance for reporting root mean square (RMS) sound pressure levels.

Table 3.2-2. Adopted Underwater Acoustic Criteria for Marine Mammals

Species	Underwater Noise Thresholds (dB)				
	Level B Harassment			Level A Harassment	
	Vibratory Pile Driving Disturbance Threshold	Impact Pile Driving Disturbance Threshold	Marine Mammal Hearing Group (see Table 3.2-3)	PTS SEL_{cum} Threshold Peak – dB SEL_{cum} – dB	
				Impulsive (Impact Pile Driving)	Non-Impulsive (Vibratory Pile Driving)
Cetaceans	120 dB RMS (or ambient if higher)*	160 dB RMS	Low Frequency	219dB Peak 183 dB SEL_{cum}	199 dB SEL_{cum}
			Mid Frequency	230 dB Peak 185 dB SEL_{cum}	198 dB SEL_{cum}
			High Frequency	202 dB Peak 155 dB SEL_{cum}	173 dB SEL_{cum}
Pinnipeds	120 dB RMS (or ambient if higher)*	160 dB RMS	Phocid	218 dB Peak 185 dB SEL_{cum}	201 dB SEL_{cum}
			Otariid	232dB Peak 203 dB SEL_{cum}	219 dB SEL_{cum}

*Threshold is 120 dB or ambient level, whichever is highest. Ambient levels were measured by the U.S. Navy at 129.2 dB in the San Diego Bay.

Table 3.2-3. Definition of Marine Mammal Hearing Group

Marine Mammal Hearing Group	
Functional Hearing Group	**Functional Hearing Range**
Low Frequency Cetaceans – gray whales	7 Hz to 35 kHz
Mid Frequency Cetaceans – dolphins, toothed whales, beaked whales, bottlenose whales	150 Hz to 160 kHz
High Frequency Cetaceans – true porpoises, kogia, river dolphins, cehalorhynchid, lagenorhynchus cruciger& L. australis	275 Hz to 160 kHz
Phocid Pinnipeds – true seals, including harbor seals	50 Hz to 86 kHz
Otariid Pinnipeds – sea lions and fur seals	60 Hz to 39 kHz

Green Sea Turtles

For sea turtles, the Navy established a threshold for injury from vibratory pile driving and impact driving at 190 dB RMS. Behavioral effects thresholds were noted to be more complex to establish than injury, as there is limited data on turtle behavioral response to sound. Turtles exhibit a low frequency hearing range, typically below 2 kHz. As a result, the potential for behavioral response to sound is further limited to sounds at both elevated intensity and low frequency. While there are no widely adopted behavioral thresholds for sound impacts to turtles, Table 3.2-4 includes RMS criteria for Green Sea Turtles.

Table 3.2-4. Adopted Underwater Acoustic Criteria for Green Sea Turtles

Level of Effect	Underwater Noise Thresholds (dB re: 1µPa)	
	Vibratory Pile Driving Disturbance Threshold	Impact Pile Driving Disturbance
Adaptive action trigger for impulsive noise exposure	--	160 dB RMS
Potential harassment take from exposure	--	166 dB RMS
Injury from sound exposure	190 dB RMS	190 dB RMS

3.2.4.3 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 Discussion

Project construction activities would potentially cause substantial noise, increases in turbidity, and release of construction-related pollutants into U.S. and State waters. In addition, overwater structures are anticipated to result in an increase in overwater coverage that would have the potential to significantly impact special-status species. Each of these potential impacts is described in more detail below.

The landside portion of the project site is fully developed and does not contain natural habitat suitable for special-status plant species. Therefore, there would be no impact on special-status plant species.

In addition, eelgrass, which is categorized as EFH and is further designated as a Habitat of Particular Concern, was identified within the waterside portion of the project site; however, impacts related to eelgrass are discussed in Threshold 2 below because it is considered a sensitive natural community.

Impacts from Construction Noise

The use of large machinery for construction and demolition as well as pile driving could result in construction-induced noise impacts that could alter the behavior of protected species. These impacts could occur from construction activities such as hammering, drilling, operation of heavy construction equipment, or transport of construction materials. Additionally, the installation of new in-water and overwater structures would also have the potential to result in similar impacts on protected species from in-water construction activities such as pile driving. Construction-induced noise impacts from pile driving could disrupt the foraging behavior of the California least tern if construction occurs during the California least tern nesting season (typically mid- to late April through mid-August with September 15 marking the end of the nesting season). Other sensitive fish-foraging avian species such as brown pelican can similarly be impacted. This would be considered a significant impact (**Impact-BIO-1**).

Mitigation measures for reducing noise related impacts on foraging California least tern and other sensitive fish feeding avian predators during nesting season (**Impact-BIO-1**) include construction monitoring during the nesting season (**MM-BIO-1**). The monitor would have the ability to reduce or

temporarily stop noise producing activities if those activities were believed to impact or otherwise alter foraging behavior of sensitive avian species during the nesting season. For instances involving impact hammer or vibratory pile driving, the driving of piles would be limited to the non-breeding season of any sensitive avian species nesting within or nearby the project site (e.g., September 16 to March 31 for California least terns). Implementation of **MM-BIO-1** would reduce **Impact-BIO-1** to less than significant.

Construction noise can also impact species protected under the Migratory Bird Treaty Act and California Fish and Game Code if construction activities occur during the general avian nesting season (February 15 through August 31). For instance, marine dependent avian species such as the black-crowned night heron nest in trees near shore where 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. This would be considered a significant impact (**Impact-BIO-2**).

While disturbance of nesting marine dependent avian species (**Impact-BIO-2**) is not anticipated due to the lack of nesting habitat within the project site, disturbance can be minimized by ensuring that nesting bird behavior is not modified during construction activities that generate loud noises. **MM-BIO-2** would require the project applicant to retain a qualified biologist to perform a nesting bird survey of the noise generating activity one week prior to the start of construction utilizing heavy equipment, and if nests are found, survey once per week during construction until use of heavy equipment ceases. If noise levels are anticipated to be 10 dBA or greater above ambient background noise levels within the vicinity of an active nest, sound barriers with a suitable sound transmission class (STC) rating would be placed between the noise generating activity and the nest. Distance from the nest would be determined by the qualified biologist based on the species nesting and the noise acceptability exhibited by the bird. If noise effects cannot be minimized, construction shall be altered to the extent necessary to ensure that impacts to the nesting species are negligible in a manner determined by regulatory agencies and based on the opinion of the qualified biologist. Implementation of **MM-BIO-2** would reduce **Impact-BIO-2** to less than significant.

The nesting behavior of American peregrine falcon, which is not a marine dependent avian species, would not likely be affected by construction and noise disturbances at the project site, mainly because such noises are very common in urban settings and are unlikely to deter prey species from periodically using the project site.

Several marine species may occur in marine environments within the project site, including green sea turtle, as well as marine mammals such as bottlenose dolphin, long-beaked common dolphin, short-beaked common dolphin, California sea lion, and harbor seal (Appendix E). California sea lions and harbor seals may haul out on human-made structures in the NASSCO facility. Some project construction activities (i.e., impact and vibratory pile driving) would generate high levels of noise and vibration. NMFS defines noise thresholds for marine mammal harassment relative to ”Level A" and “Level B” harassment. Level A harassment refers to any action that has potential to injure marine mammals. Level B harassment refers to disruption of marine mammal behavior (e.g., foraging, traveling, resting) due to impulsive noise (i.e., impact pile driving) or continuous noise (i.e., vibratory pile driving) (Appendix F).

To determine whether the project would result in Level A or B harassment on marine mammals, a hydroacoustic (i.e., underwater noise) analysis was conducted, the results of which are provided in Table 3.2-5 below. As shown in the table, pile installation using an impact hammer are predicted to have potential Level A marine mammal impacts. Level A impacts may extend out to 474 meters each day, depending on the type of activity and animal species. The range of Level B impacts would be

greater, extending out to approximately 1.8 kilometers (1.1 miles) during vibratory pile driving under the unattenuated condition. For activities involving impact driving only, Level B zones would be less than 160 meters under the unattenuated condition. The prediction that sounds would extend out to these distances would be associated with waters that have clear line of sight to the construction activity.

Table 3.2-5. Distance to the Adopted Marine Mammal Thresholds for Pile Driving Activities

Driving Method	Pile Type	Pile Size	Piles per Day	Number of Strikes per Pile	Condition[1]	Level A Injury Zone (meters)[2]					Level B Harassment Zone (meters)[5]
						Cetaceans[3]			Pinnipeds[4]		
						LF	MF	HF	PW	OW	
Impact	Concrete	12–18 inches. Round or Square	10	1,000	Unattenuated	136	5	162	73	5	63
					Attenuated	63	2	75	34	3	29
Impact	Concrete	20–24 inches. Round or Square	10	1,000	Unattenuated	398	14	474	213	16	100
					Attenuated	185	7	220	99	7	46
Impact	Steel H	12–14 inches	10	1,000	Unattenuated	341	12	406	183	13	158
					Attenuated	158	6	189	85	6	74
Vibratory	Steel Pipe	13 inches	2	NA	Unattenuated	6	1	9	4	<1	1,131
					Attenuated	3	<1	4	2	<1	525
Vibratory	Steel Sheet	—	2	NA	Unattenuated	9	<1	14	6	<1	1,792
					Attenuated	4	<1	6	3	<1	832

[1] Attenuated condition assumes 5- decibels lower sounds owing to different attenuation mechanisms like bubble curtains, isolation casing, or other methods that may be used during the pile driving activities.

[2] Using SELcum threshold.

[3] Cetaceans include whales and dolphins.

[4] Pinnipeds include seals and sea lions.

[5] Green sea turtle monitoring follows the marine mammal Level B Harassment Zone parameters.

Notes: NA = Not Applicable. LF = Low Frequency cetaceans (gray whales). MF = Mid-Frequency cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales). HF = High Frequency cetaceans (true porpoises). PW = Phocids [i.e., true seals including harbor seal]. OW = Otariids [i.e., sea lions including California sea lion].

Source: Appendix F.

Pile driving activities may also disrupt the behavior of green sea turtles if present in the project site. Although there is no specific guidance relative to noise levels and calculation of isopleths for green sea turtle monitoring, protective monitoring for green sea turtles is often performed using the Level B harassment zones for marine mammals. This ensures no take of green sea turtles occurs within those zones.

In addition to marine mammals and green sea turtles, several species of fish have been observed within and surrounding the project site, including on hard bottom habitat, unvegetated soft bottom, and vegetated soft bottom. As described in the project underwater assessment (Appendix F) and shown in Table 3.2-6, pile driving activities would generate high levels of noise and vibration up to 150 dB RMS pressure that would travel out to distances in the unattenuated condition of between 46

meters and 736 meters, assuming no intervening structures or land mass and depending on the type of pile being driven, the number of piles driven per day, and the number of strikes per pile.

Table 3.2-6. Distance to the Various Adopted Fish Thresholds for Pile Driving Activities

Driving Method	Pile Type	Pile Size	Piles Installed per Day	Number of Strikes per Pile	Condition[1]	Distance to Various Adopted Fish Thresholds (meters)			
						Peak 206 dB[2]	RMS 150 dB[2]	Cumulative SEL	
								187 db[3]	183 db[3]
Impact	Concrete	12–18 inches. Round or Square	10	1,000	Unattenuated	<1	293	46	46
					Attenuated	<1	136	22	22
Impact	Concrete	20–24 inches. Round or Square	10	1,000	Unattenuated	<1	464	136	136
					Attenuated	<1	215	63	63
Impact	Steel H	12–14 inches	10	1,000	Unattenuated	4	736	117	117
					Attenuated	2	341	54	54
Vibratory	Steel Pipe	13 inches	2	NA	Unattenuated	<1	46	N/A	N/A
					Attenuated	<1	22	N/A	N/A
Vibratory	Steel Sheet	—	2	NA	Unattenuated	<1	74	N/A	N/A
					Attenuated	<1	34	N/A	N/A

[1] Attenuated condition assumes 5- decibels lower sounds owing to different attenuation mechanisms like bubble curtains, isolation casing, or other methods that may be used during the pile driving activities.

[2] dB: re 1 µpa

[3] dB: re 1 µpa2sec

Therefore, in-water construction associated with the proposed project could generate enough underwater noise to physically injure marine mammals, sea turtles, and fish from impact hammer or vibratory pile driving. 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 activities 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**).

Potential noise-related impacts on marine mammals, green sea turtles, and fish (**Impact-BIO-3**) can be minimized by implementing the various measures required under mitigation measure **MM-BIO-3**. This mitigation measure would require development of a marine mammal monitoring plan and subsequent monitoring of hauled out marine mammals whenever noise generating activities are in excess of 90 dB 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 a 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 90 dB RMS or 100 dB RMS for harbor seals and non-harbor seals, respectively. The zones of influence to thresholds for harassment of hauled out marine mammals are provided in Appendix F. For portions of the proposed project that generate in water noise such as impact and vibratory pile driving, the biological monitor will monitor for marine mammals when in the water 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 (Appendix F). Like monitoring for hauled out animals, the biological monitor will have the authority to halt or modify work based on animal observations relative to monitoring isopleths. Green sea turtles will be monitored using the maximum calculated isopleth for Level B harassment of marine mammals; there is no specific guidance for sea turtles, but they are often monitored alongside marine mammals to ensure their protection. In addition, construction activities where impact hammer and vibratory pile driving occurs shall utilize a soft start for pile driving. This generally means performance of 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. Implementation of **MM-BIO-3** would reduce **Impact-BIO-3** to less than significant.

Impacts from Increased Turbidity

Construction activities associated with structural pile repair and replacement, quay wall revetment repairs, and the Repair Complex Wharf improvements could increase levels of turbidity in waters within the Bay in the absence of mitigation. This could occur either during activities such as pile driving, revetment repair, and bulkhead construction under the Repair Wharf Complex; incidentally during vessel contact with bottom substrate; and by propeller wash in shallower water. Increases in turbidity in water may occur as a result of displaced sediment from construction activities. In general, increased turbidity could limit the ability of California least terns and other sensitive fish-foraging avian species to locate prey. Construction activities could 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 waters of the U.S., either from construction equipment, landside construction vehicles, construction vessels, and from partially completed overwater structures. These impacts would be considered a significant impact (**Impact-BIO-4**).

Turbidity generated by in-water construction activities (**Impact-BIO-4**) can be reduced by implementing **MM-BIO-4**. This mitigation measure requires vessel operators to be instructed about the impacts of propeller wash as it relates to erosion of sediment and suspension of fine particulates, thereby allowing vessel operators to adjust operations that lessen the impact. All vessels would be required to use depth sounders which are routinely checked to ensure vessels are positioned to avoid shallow water areas to the extent practical. Finally, when project construction involves necessary bottom disturbance such as from pile driving, silt curtains would be in place around the activity to limit the spread of any turbidity generated during the bottom disturbing activity (**MM-WQ-2**). Mitigation measures MM-HAZ-1 through MM-HAZ-9, which require secondary containment structures, hazards-related worker training, equipment inspection, proper equipment instrumentation, hazardous materials monitoring, oil/skill kits, barge loading procedures, removed pile placement, and removed material cleanup would significantly reduce the potential of inadvertent introduction of pollutants such as fuel, oil, and/or other industrial and mechanical fluids

into waters of the U.S., either from construction sources. As such, **MM-BIO-4, MM-WQ-2** and **MM-HAZ-1 through MM-HAZ-9** would reduce **Impact-BIO-4** to less than significant.

Impacts from Overwater Structures on Foraging Habitat

Overwater structures have the potential to affect nearshore habitat through a number of mechanisms that result from altered light availability, increased human interaction with the marine environment, and tidal current patterns. These potential impacts include reduced primary production, altered wave and tidal energy, increased substrate disturbances, and increased nutrient loading (Nightingale and Simenstad 2001). California least tern and other plunge diving fish predatory birds such as California brown pelican have the potential to utilize open water habitat within and adjacent to the project site for foraging opportunities.

Total overwater coverage would permanently increase from 157,297 square feet to 167,507 square feet. The installation and use of overwater structures would result in temporary and permanent reduction of potential open water foraging habitat for California least tern and other sensitive fish-foraging species (e.g., California brown pelicans). The impacts on foraging habitat for California least tern and other sensitive fish-foraging species from increased overwater coverage are considered significant (**Impact-BIO-5**).

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-5** includes options for mitigating impacts associated with **Impact-BIO-5**. 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. The in-kind option includes removal of existing overwater coverage at a 1:1 mitigation ratio at other locations within the project site. Out-of-kind mitigation measures include creation or restoration of wetlands or eelgrass habitat at a 1:1 mitigation ratio to improve fisheries and associated wildlife beneficial uses in consultation with regulatory agencies identified above, contribution to an approved mitigation bank, and/or purchasing credits from the District's shading credit program. Implementation of **MM-BIO-5** would reduce **Impact-BIO-5** to less than significant. The potential impacts and mitigation measures related to eelgrass, which is considered a sensitive natural community, are discussed under Threshold 2 below.

Level of Significance Prior to Mitigation

Implementation of the proposed project 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. Potentially significant impact(s) include the following:

> **Impact-BIO-1: Construction Noise Impacts on Foraging Behavior of Protected Avian Species.** Construction of the proposed project could result in construction-induced noise impacts that could alter the behavior of protected species. Construction-induced noise impacts from pile driving could disrupt the foraging behavior of the California least tern if construction occurs during the California least tern nesting season (April 1 through September 15). Other sensitive fish-foraging avian species such as brown pelican can similarly be impacted. This impact would be potentially significant.

Impact-BIO-2: Potential Disturbance of Nests Protected by the Migratory Bird Treaty Act and California Fish and Game Code from Construction Noise. Noise from construction activity could impact species protected under the Migratory Bird Treaty Act and California Fish and Game Code if construction activities occur during the general avian nesting season (February 15 through August 31). For instance, marine dependent avian species such as the black-crowned night heron nest in trees near shore where there 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, this impact would be potentially significant.

Impact-BIO-3: Potential Disruption of or Injury to Green Sea Turtles, Marine Mammals, and Fishes During Pile Driving Activities. In-water construction associated with proposed construction could generate enough underwater noise to physically injure or cause behavioral modification of marine mammals, sea turtles, and fishes from impact hammer or vibratory pile driving occurring 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 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 potentially significant.

Impact-BIO-4: Water Quality Impairment Impacts on California Least Tern and California Brown Pelican Foraging. Construction activities associated with structural pile repair and replacement, quay wall revetment repairs, and the Repair Complex Wharf improvements could increase levels of turbidity in waters within the Bay, which could limit the ability of California least terns and other sensitive fish-foraging avian species to locate prey. Construction activities could 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 waters of the U.S., either from construction equipment, landside construction vehicles, construction vessels, and from partially completed overwater structures. This impact would be potentially significant.

Impact-BIO-5: Loss of Open Water Foraging Habitat from Overwater Structures. California least tern and other sensitive fish-foraging birds (e.g., pelicans) have the potential to utilize open water habitat within and adjacent to the project site for foraging opportunities. The increase in overwater coverage resulting from overwater structures would reduce the available open water habitat that is used for foraging by fish-eating avian species. This coverage also results in reduced primary productivity in the water column and the seafloor. This impact would be potentially significant.

Mitigation Measures

For **Impact-BIO-1**:

MM-BIO-1: Implement Construction Measures to Avoid or Reduce Noise-Related Foraging Impacts on California Least Tern and Other Sensitive Fish Foraging Avian Species. If pile driving activities occur between April 1st and September 15th, the project applicant shall retain a qualified biologist approved by the District to monitor during pile driving activities. The project applicant 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. These actions shall include the following:

1. For all pile driving activities performed during the California least tern nesting season (April 1st to September 15th), a qualified biologist shall be on site observing for foraging California least terns and other sensitive avian species with potential to occur (e.g., California brown pelican). If any California least terns (or other sensitive avian species) 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:
    a. Reducing the intensity of pile driving.
    b. Placing sound dampening panels on pile driving equipment.
    c. Restricting pile driving to periods when sensitive avian species are not present.
2. A biological monitor shall be on-site during any construction activities that would occur within foraging habitat to ensure CESA-listed species are not agitated, killed, or injured.

For **Impact-BIO-2**:

MM-BIO-2: Implement Construction Noise Measures to Avoid or Reduce Noise Impacts on Nesting California Least Tern and Other Sensitive Nesting Marine-Dependent Avian Species. To avoid impacts on nesting marine-dependent birds, during the breeding season (i.e., April 1st-September 15th), the project proponent shall implement the following measures during construction:

1. The project proponent shall retain a qualified biologist, approved by the District, to perform a marine dependent nesting bird survey within 500 feet of the noise-generating activity one week prior to the start of construction utilizing heavy equipment.
2. 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.
3. 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.
4. If the survey confirms nesting within 500 feet of the disturbance footprint, 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. In addition, if the qualified biologist(s) prepares any subsequent reports, the reports shall be submitted to the District.
5. 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.
6. If sensitive avian species begin nesting within 500 feet 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.

7. 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.
8. 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 Noise Reducing Measures During Pile Installation Activities to Avoid Impacts on Marine Mammals, Green Sea Turtles, and Fish. Prior to and during construction activities involving in-water impact hammer pile installation or vibratory pile installation or removal, the project proponent shall implement marine mammal, green sea turtle and fishes noise reducing measures, which shall include the following requirements:

1. 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 (2022). The impact radius shall be established by determining the largest zone of influence associated with in-water construction activities occurring that workday (Zone of Influence is the area that extends out to Level B harassment area indicated in Table 3.2-1 of the EIR).
2. If the qualified biologist observes any special-status species prior to starting pile installation, the project proponent shall not start work until the special-status species has left the area to be affected. Exceptions may apply if an Incidental Harassment Authorization (IHA) is obtained from NOAA, in which case the IHA will identify those exceptions.
3. Pile driving activities shall only be conducted during daylight hours when biological monitors can visually observe marine mammals.
4. Pile driving shall not exceed 10 piles per day and 1,000 strikes per pile or a combination that does not exceed a total of 10,000 strikes in 1 day.
5. 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.
6. Installation of an acoustical bubble curtain, isolation casing, or another attenuation method approved by NMFS or CDFW shall be installed if monitoring to the attenuated distance identified in Table 10 (Fishes), Table 11 (Marine Mammals), and Table 12 (Green Sea Turtle) of Appendix F (i.e., *The Port of San Diego NASSCO Floating Drydock and Waterfront*

Improvement Project Underwater Assessment, prepared by Illingworth and Rodkin [February 2022])shall be required if monitoring to the "attenuated" distance identified in these tables. Otherwise, monitoring shall be required to the distances identified under the "unattenuated" condition of these same tables.

7. The biological monitor shall note observations of the presence of sensitive marine species, including California least tern, green sea turtles, and marine mammals, within the zone of influence (see Tables 10, 11, and 12 of Appendix F of the EIR). Observations shall include hauled out harbor seals and California sea lions. The biological monitor shall observe the site for 15 minutes prior to all pile driving activities and during all pile driving activities. If sensitive marine species are observed within the zone of influence, during or 15 minutes before pile driving, the biological monitor shall immediately notify the on-site supervisor or inspector and require that pile driving either not be initiated or temporarily cease until the protected species have moved outside of the zone of influence on their own. The biological monitor shall have the authority to stop work at any time due to observed species behavior or uncertainty regarding potential to harm a species due to pile driving activities or noise generated from the activity.
8. "Shutdown zones" have been established for sensitive marine species. If a sensitive marine species enters the shutdown zone during active pile driving, the biological monitor shall stop pile driving until the species exits the shutdown zone. These shutdown zones are provided in Table 3.2-5 of the EIR.
9. If weather or sea conditions restrict the biological monitor's ability to observe sensitive marine species within the zone of influence, then pile driving activities shall cease until conditions improve.
10. The biological monitor shall maintain records of the species, date, and time of any sensitive marine species sightings, as well as species behavior, and communications with the contractor during pile driving. The biological monitor shall submit copies of these records to the District on a weekly basis during construction.

For **Impact-BIO-4**:

Implement **MM-HAZ-1 through MM-HAZ-9,** as discussed in Section 3.5, *Hazards and Hazardous Materials*,

Implement **MM-WQ-2**, as discussed in Section 3.6, *Hydrology and Water Quality*.

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 applicant shall implement the following construction measures in accordance with applicable Federal, State, and local regulations, including but not limited to the RWQCB's enforcement of CWA Section 401 and the applicable NPDES permit conditions, USACE's enforcement of Section 404 and Rivers and Harbors Act Section 10, and the District's enforcement of the Stormwater Management and Discharge Control Ordinance:

1. The project applicant 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.

2. The project applicant 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.
3. If impacts on eelgrass due to water quality cannot be mitigated through contractor education and deployment of silt curtains, the project applicant shall implement mitigation measures for losses to eelgrass in accordance the California Eelgrass Mitigation Policy and with MM-BIO-6.

For **Impact-BIO-5**:

MM-BIO-5: Implement Overwater Coverage Mitigation in Coordination with the Appropriate Resource Agencies and the District to Compensate for Loss of Open Water Habitat. Prior to the commencement of construction activities that may result in overwater coverage, the project applicant shall comply with the following:

1. The project applicant shall consult with the appropriate resource agencies, including but not limited to, NMFS, 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 applicant shall secure all applicable permits for the mitigation of overwater coverage prior to commencement of waterside construction and shall comply with all permit requirements during and after waterside construction. One or more of the appropriate resource agencies may require additional conditions of approval or greater mitigation than specified in this mitigation measure.
2. The project applicant shall implement one of the following mitigation options, or a combination thereof, as determined by the District prior to the issuance of a CDP for the project. These options provide the minimum mitigation for overwater coverage impacts and/or shading impacts.

    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 the project at a 1:1 mitigation ratio, subject to the District's review and approval.

    B. Restore or create an amount of 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 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. (Note, the 1:1 ratio is suitable mitigation for open

water impacts. The 1.2:1 ratio is appropriate for impacts on eelgrass as identified in MM-BIO-6.) The restoration or creation of eelgrass habitat shall require the project applicant 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 mitigation success criteria. The project applicant 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 applicant may purchase overwater coverage credits to offset the net increase in overwater coverage.

D. Subject to the Board of Port Commissioners' approval and findings, the project applicant may purchase an amount of credits from the District's shading credit program established pursuant to BPC Policy 735 equivalent to that of the project's final shading total (i.e., to the satisfaction of the appropriate resource agencies).

E. As specified in MM-BIO-6, 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 eelgrass impacted.

Level of Significance After Mitigation

Implementation of **MM-BIO-1** would reduce impacts associated with **Impact-BIO-1** to less than significant levels by requiring construction monitoring. The monitor would have the ability to reduce or temporarily stop noise producing activities if those activities are determined by the monitor to impact or otherwise alter foraging behavior of sensitive avian species.

Implementation of **MM-BIO-2** would reduce **Impact-BIO-2** to less-than-significant levels by requiring preconstruction nesting bird surveys. If noise levels are anticipated to be 10 dBA or greater above ambient background noise levels within the vicinity of an active nest, MM-BIO-2 requires the installation of sound barriers and, if noise effects cannot be minimized, alteration of construction to the extent necessary to ensure that impacts to the nesting species are negligible.

Implementation of **MM-BIO-3** would reduce **Impact-BIO-3** to less-than-significant levels by requiring development of a monitoring plan for marine mammals, green sea turtles, and fishes. The use of soft-starts further provides protection for species potentially not observed at the time of work start; this includes fish as well as submerged marine mammals and sea turtles.

Implementation of **MM-BIO-4, MM-HAZ-1 through MM-HAZ-9**, and **MM-WQ-2** would reduce impacts associated with **Impact-BIO-4** to less than significant levels by requiring contractor education relative to construction actions that can increase turbidity and requiring turbidity curtains. **MM-BIO-4** also requires the implementation of construction measures, such as silt curtains, which will protect water quality and allow foraging space with uninterrupted water quality for fish eating marine birds in accordance with regulations. **MM-HAZ-1 through MM-HAZ-9** require secondary containment structures, hazards-related worker training, equipment inspection, proper equipment instrumentation, hazardous materials monitoring, oil/skill kits, barge loading procedures, removed pile placement, and removed material cleanup to significantly reduce the potential of inadvertent introduction of pollutants such as fuel, oil, and/or other industrial and mechanical fluids into waters of the U.S., either from construction sources.

Implementation of **MM-BIO-5** would reduce **Impact-BIO-5** to less-than-significant levels by requiring in-kind mitigation if feasible, or out-of-kind mitigation if in-kind options are not available. Mitigation measure **MM-BIO-5** includes various mitigation options that 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. This includes implementation of any combination of the following mitigation options at a 1:1 ratio for no net increase in overwater coverage per the CWA: removing overwater coverage within the San Diego Bay portion of the project site; restoring or creating wetland or eelgrass habitat at a suitable mitigation site within San Diego Bay; purchasing overwater coverage credits for a suitable in lieu fee program or mitigation bank; and/or purchasing credits from the District's shading credit program. Although **MM-BIO-5** would reduce **Impact-BIO-5** 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-5** 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-5** would be less than significant.

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 Discussion

Terrestrial habitat within the project site is entirely developed and does not contain any natural habitat. Therefore, no terrestrial sensitive natural communities or riparian habitat would be adversely affected as a result of project implementation.

Eelgrass habitat, which comprises approximately 478 square meters (5,145 square feet) of the marine habitat in the project site, is considered a sensitive habitat, and is managed by NMFS as EFH.

The eelgrass habitat on the project site is also classified as a Habitat Area of Particular Concern (HAPC) as defined by the Magnuson-Stevens Fishery Management and Conservation Act.

Proposed construction activities have the potential to have a substantial adverse effect on eelgrass. These activities include temporary new placement of the dry dock structure, structural pile repair and replacement, quay wall revetment repairs, and the Repair Complex Wharf improvements. Construction related impacts associated with these proposed activities could result from increased turbidity from support vessels, equipment, installation of structures and piles, and shading from relocation of the dry dock structure. The operation of vessels over shallow water during construction can decrease light to the seafloor by increasing turbidity from propeller wash or direct contact with the seafloor. 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 and reduce primary productivity. Additionally, any contact with the seafloor where eelgrass occurs could directly dislodge and remove eelgrass and other vegetation. Although **MM-BIO-4** provides for measures to reduce and restrict turbidity, in some cases eelgrass may occur within the footprint where construction vessels and turbidity curtains are placed during construction. In such cases, the contained turbidity may still impact eelgrass that is within the limits of the silt curtains and construction activity. In some locations where quay wall revetment repair is proposed, eelgrass is immediately adjacent to repair activities and may be impacted by placement and/or removal of material at those select locations. Additionally, extended temporary placement of the dry dock, construction support vessels, and barges could impede eelgrass growth depending on the location, height of structure, and sun angle during the presence of each structure. These construction-related impacts on eelgrass would be significant (**Impact-BIO-6**).

The mitigation measures to reduce construction turbidity impacts on eelgrass beds are the same as those proposed under **MM-BIO-4**. Impacts associated with reduced growth and cover of eelgrass or direct removal of eelgrass during construction would be mitigated by the measures identified under **MM-BIO-6**. This mitigation measure would follow guidelines set by the CEMP (NMFS 2014). Pre- and post-construction eelgrass surveys would be required at the construction site and a suitable reference area. The final calculation of mitigation requirements should occur after the post-construction monitoring. Should losses to eelgrass occur, mitigation should be carried out in accordance with the CEMP at or before the time of impact in a manner that conservatively mitigates for all potential impacts to eelgrass. Mitigation by replanting or restoring eelgrass should follow the CEMP's eelgrass restoration ratio. Any implemented eelgrass mitigation site shall be monitored for 5 years to ensure successful eelgrass establishment in accordance with the CEMP. Implementation of mitigation measures **MM-BIO-4** and **MM-BIO-6** would reduce **Impact-BIO-6** to a less-than-significant level.

The project would increase existing fill volume by approximately 13,351 cy over an area of approximately 13,571 sf (see Table 2-5). As noted in Section 30233 of the CCA, [t]he diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions…where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects."

The fill impacts would partially occur in unvegetated shallow and moderately deep subtidal habitat areas. According to the San Diego Bay INRMP (2013), when compared to historic (1859) conditions, approximately 59% of both unvegetated and vegetated shallow subtidal habitat remain in the bay. The San Diego Bay INRMP considers this habitat to be a scarce habitat that requires conservation and enhancement. An objective of the San Diego Bay INRMP is to conserve and enhance the attributes of

unvegetated shallow subtidal sites that sustain a diverse and abundant invertebrate community, fish and wildlife foraging, nursery function for numerous fishes, as well as an ecological role in detritus-based food web support. Another objective of the San Diego Bay INRMP is to conserve and enhance the attributes of moderately deep habitat that support diverse and abundant invertebrate forage for fishes and birds, as well as needed exchanges of energy, materials, and biota among habitats, in balance with the need for shallow and intertidal habitats. Due to the potential loss of marine habitats that are recommended for conservation and enhancement in San Diego Bay, some of which have been historically declining, the increase in fill would be considered a significant adverse impact (**Impact-BIO-7**).

Mitigation measure **MM-BIO-7** is required to ensure there would be no net increase in fill within the San Diego Bay. This mitigation measure requires the project applicant to consult with the appropriate resource agencies, including but not limited to, NMFS (under the Magnuson-Stevens Act), USFWS (Section 7 through one or more federal permits), RWQCB (under Section 401 of the CWA), and/or USACE (under Section 404 of the CWA and Section 10 of the Rivers and Harbor Act), and to secure all applicable permits for the mitigation of in-water fill prior to waterside construction. In addition, **MM-BIO-7** provides for measures that increase the primary productivity and ecological value of other areas in San Diego Bay by removing cover or through the creation of habitat through purchasing mitigation bank credits. This measure requires the project applicant to implement one of the mitigation options identified in the measure to provide the minimum mitigation for in-water fill impacts at a 1:1 mitigation ratio. Implementation of **MM-BIO-7** would reduce **Impact-BIO-7** to a less-than-significant level.

As discussed under Threshold 1, the proposed project would permanently increase overwater coverage in the San Diego Bay by 10,210 sf. The impacts to fish foraging birds, water column primary productivity, and benthic productivity are covered under Impact-BIO-5 and MM-BIO-5. However, there is approximately 1-2 square meters of eelgrass directly beneath the proposed temporary catwalk and another square meter of eelgrass very close to the catwalk. It is not likely that this area of eelgrass would be impacted by construction-related or operational activities because the catwalk would only be in position when the drydock is in its temporary position, which would be infrequent. Nonetheless, an increase in overwater coverage above and adjacent to eelgrass could lead to lower eelgrass productivity due to shading. The lost eelgrass productivity affects all higher trophic levels due to the lost production of organic carbon. Therefore, the loss of eelgrass productivity from overwater coverage and shading would be a significant impact (**Impact-BIO-8**).

Level of Significance Prior to Mitigation

Implementation of the proposed project would have a substantial adverse effect, either directly or through habitat modifications, on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW, NMFS, or USFWS. Potentially significant impacts include the following.

Impact-BIO-6: Potential Water Quality Impairment or Construction-Related Impacts on Eelgrass. Construction related impacts associated with proposed construction activities could result from increased turbidity from support vessels, equipment, installation of structures and piles, and shading from support vessels, barges, and relocation of the dry dock structure. The operation of vessels over shallow water during construction can decrease light to the seafloor by increasing turbidity from propeller wash or direct contact with the seafloor. 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 and reduce primary productivity.

Additionally, any contact with the seafloor where eelgrass occurs could directly dislodge and remove eelgrass and other vegetation. These construction-related impacts would be significant.

Impact-BIO-7: Loss of Marine Habitat from Increased Fill in San Diego Bay. The project would increase existing fill volume by approximately 13,351 cy over an area of approximately 13,571 sf. These fill impacts would partially occur in unvegetated shallow and moderately deep subtidal habitat areas. Due to the potential loss of marine habitats that are recommended for conservation and enhancement in San Diego Bay, some of which have been historically declining, the increase in fill would be considered a significant adverse impact.

Impact-BIO-8: Loss of Eelgrass Productivity from Overwater Coverage and Shading. The proposed project would permanently increase overwater coverage in the San Diego Bay by 10,210 sf. While only up to 2 square meters is anticipated to be directly shaded from the proposed project (catwalk to the drydock when at the Lot 20 position), any increase in overwater coverage will lead to lower eelgrass productivity due to shading where the overwater structure is above eelgrass. The lost eelgrass productivity affects all higher trophic levels due to the lost production of organic carbon. The loss of eelgrass productivity from overwater coverage and shading would be a significant impact.

Mitigation Measures

For **Impact-BIO-6**:

Implement **MM-BIO-4**, as discussed under Threshold 1 above.

MM-BIO-6: Implement Eelgrass Mitigation and Monitoring in Compliance with the California Eelgrass Mitigation Policy. The project applicant shall comply with all requirements of the California Eelgrass Mitigation Policy (CEMP) (NMFS 2014). If impacts on eelgrass occur based on a comparison of pre- and post-construction eelgrass surveys as specified in this mitigation measure, NASSCO shall retain a qualified marine biologist to develop an eelgrass mitigation and monitoring plan in compliance with the CEMP (NMFS 2014). The mitigation and monitoring plan shall be submitted to the District and NMFS for approval and shall be implemented to compensate for any loss of eelgrass. Specific requirements of this mitigation include the following:

- Prior to the commencement of any in-water construction activities, a qualified marine biologist retained by NASSCO and approved by the District shall conduct a preconstruction eelgrass survey. 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 applicant 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 CCC, USACE, and San Diego RWQCB.
- Within 30 days of completion of in-water construction activities, a qualified marine biologist retained by NASSCO and approved by the District shall conduct a post construction eelgrass survey during the active eelgrass growing season (March 1st – October 31st). 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 postconstruction survey shall evaluate potential eelgrass impacts associated with construction. Upon completion of the postconstruction survey, the qualified marine biologist shall submit the survey report to the District and resource agencies within 30 days.

- If impacts on eelgrass are detected, NASSCO shall implement the following:
    - A qualified marine biologist retained by NASSCO and approved by the District shall develop an eelgrass mitigation plan for in-kind mitigation. The qualified marine biologist shall submit the mitigation plan to the District and NMFS within 60 days following the postconstruction survey.
    - Mitigation for eelgrass impacts shall be at a ratio of no less than 1.2:1, as required by the CEMP.
    - Mitigation shall commence within 135 days of any noted impacts on eelgrass, such that mitigation commences within the same eelgrass growing season that impacts occur.
    - Upon completing mitigation, the qualified biologist shall conduct mitigation performance monitoring at performance milestones of 0, 12, 24, 36, 48, and 60 months.
    - The qualified biologist shall conduct all mitigation monitoring during the active eelgrass growing season and shall avoid the low growth season (November–February). Performance standards shall be in accordance with those prescribed in the CEMP.
    - The qualified biologist shall submit the monitoring reports and spatial data to the District and NMFS within 30 days after the completion of each monitoring period. The monitoring reports shall include all specific requirements identified in the CEMP.
- At least two years of annual post-construction eelgrass surveys shall be conducted during the active eelgrass growing season. The additional annual surveys shall evaluate the potential for long-term impacts from structural shading on eelgrass.

If 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 protracted mitigation and monitoring through planning for long-term impacts and providing eelgrass transplantation prior to monitoring and evaluation of all impacts.

For **Impact-BIO-7**:

MM-BIO-7: Implement In-Water Fill Mitigation in Coordination with the Appropriate Resource Agencies and the District to Compensate for Permanent Loss of Unvegetated Shallow and Moderately Deep Subtidal Habitat Resulting from In-Water Fill. Prior to commencement of construction activities that may result in in-water fill, the project applicant shall comply the following:

1. The project applicant shall consult with the appropriate resource agencies, including but not limited to, NMFS (under the Magnuson-Stevens Act), USFWS (Section 7 through one or more federal permits), RWQCB (under Section 401 of the CWA), and/or USACE (under Section 404 of the CWA and Section 10 of the Rivers and Harbor Act), regarding mitigation of impacts associated with loss of beneficial uses from in-water fill and associated loss of habitat function. The project applicant shall secure all applicable permits for the mitigation of in-water fill prior to commencement of waterside construction, including but not limited to a CWA Section 404 permit and Rivers and Harbors Act Section 10 permit from the USACE and a CWA Section 401 water quality certification from the RWQCB.

2. The project applicant shall implement one of the following mitigation options, or a combination thereof, to the satisfaction of the permitting agencies (USACE and RWQCB). These options provide the minimum mitigation for in-water fill impacts at a 1:1 mitigation ratio. One or more of the appropriate resource agencies may require additional or greater mitigation than specified in these mitigation options:

    A. Remove an amount of existing overwater coverage, including derelict structures, within San Diego Bay that is equivalent to the proposed project's net increase in the area of in-water fill based on final construction plans. This would replace the area affected by the project at a 1:1 mitigation ratio, subject to the District's review and approval.

    B. Purchase mitigation credits of in-kind habitat at the future Wetland Mitigation Bank at Pond 20 or other mitigation bank approved by the resource agencies to ensure no net-loss of bay waters due to fill impacts. Prior to any construction activity resulting in the fill impacts, the project applicant shall provide evidence to the District and permitting agencies that the mitigation credits have been purchased. Based on approved final construction plans, the mitigation credits shall compensate for the net increase of fill impacts at a 1:1 mitigation ratio.

For **Impact-BIO-8:**

Implement **MM-BIO-6**, as described above.

Level of Significance after Mitigation

Implementation of **MM-BIO-4** and **MM-BIO-6** would reduce **Impact-BIO-6** to less than significant by requiring the implementation of various measures to reduce turbidity from in-water construction, pre- and post-construction eelgrass surveys in accordance with the CEMP, and, in the event eelgrass is impacted, requiring mitigation for eelgrass impacts at a ratio of no less than 1.2:1, as required by the CEMP. If impacts on eelgrass are detected during the 2-year post-construction period, **MM-BIO-6** also requires the project proponent to provide additional mitigation for eelgrass impacts by transplanting eelgrass at a suitable restoration site at a ratio of 1.2:1. For similar reasons, **MM-BIO-6** would reduce **Impact-BIO-8** to less-than-significant as well.

Implementation of **MM-BIO-7** would reduce **Impact-BIO-7** to less than significant by requiring the project applicant to consult with the appropriate resource agencies, including but not limited to, NMFS (under the Magnuson-Stevens Act), USFWS (Section 7 through one or more federal permits), RWQCB (under Section 401 of the CWA), and/or USACE (under Section 404 of the CWA and Section 10 of the Rivers and Harbor Act), and to secure all applicable permits for the mitigation of in-water fill prior to waterside construction. In addition, **MM-BIO-7** requires the project applicant to implement one of the mitigation options identified in the measure to provide the minimum mitigation for in-water fill impacts at a 1:1 mitigation ratio.

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 Discussion

The terrestrial portion of the project site is completely developed and does not contain any natural habitat, including state or federally protected wetlands. The project site includes a portion of San Diego Bay, which is considered a Water of the United States.

Aside from gains in efficiency, such as reducing the distance required to move the dry dock when not in use and replacement of older dry dock ancillary engines with Tier 4 ancillary engines, project implementation would not result in changes in operational activities; thus, protect operation would not result in increased adverse effects on waters of the United States relative to existing conditions.

Construction of the in-water project elements could result in short-term water quality impacts from the disturbance of sediments within the project site (**Impact-WQ-1**, **Impact-WQ-2**, and **Impact-WQ-3**) which would be mitigated by incorporating **MM-WQ-1, MM-WQ-2,** and **MM-HAZ-10**, respectively, as discussed in Section 3.6, *Hydrology and Water Quality* and Section 3.5, *Hazards and Hazardous Materials*. Moreover, as discussed under Threshold 2, above, impacts on eelgrass habitat would result from project implementation (**Impact-BIO-6**) as well as from additional bay fill (**Impact-BIO-7**). San Diego Bay is also a navigable water and regulated by USACE under Section 10 of the Rivers and Harbors Act and Section 404 of the CWA. To address the potential for impacts on waters of the United States and navigable waters, NASSCO would be required to obtain authorization from USACE pursuant to the Section 10 process and potentially Section 404 for fill associated with additional pilings and sheet piled bulkhead (retaining wall), each also requiring a CWA Section 401 water quality certification from the RWQCB. Moreover, **MM-BIO-7**, as discussed in Threshold 2, is required to mitigate any project-related fill at a 1:1 ratio. No other modifications to state or federally protected wetlands would occur. As such, through regulatory compliance and incorporation of **MM-BIO-6** and **MM-BIO-7**, the proposed project would not result in any significant adverse impacts on state or federally protected wetlands.

Level of Significance Prior to Mitigation

Implementation of the proposed project 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. Potentially significant impact(s) include the following.

Impact-BIO-6 and **Impact-BIO-7,** as described under Threshold 2 above.

Impact-WQ-1, Impact-WQ-2, and Impact-WQ-3, as described in Section 3.6, *Hydrology and Water Quality*.

Mitigation Measures

For **Impact-BIO-6**:

Implement **MM-BIO-4**, as described under Threshold 1 above.

Implement **MM-BIO-6**, as described under Threshold 2 above.

For **Impact-BIO-7:**

Implement **MM-BIO-7**, as described under Threshold 2 above.

For **Impact-WQ-1:**

Implement **MM -WQ-1**, as described in Section 3.6, *Hydrology and Water Quality*.

For **Impact-WQ-2:**

Implement **MM-WQ-2**, as described in Section 3.6, *Hydrology and Water Quality*.

For **Impact-WQ-3:**

Implement **MM-HAZ-10**, as described in Section 3.5, *Hazards and Hazardous Materials*.

Level of Significance after Mitigation

Implementation of **MM-BIO-4** and **MM-BIO-6** would reduce **Impact-BIO-6** to less than significant by requiring the implementation of various measures to reduce turbidity from in-water construction, pre- and post-construction eelgrass surveys in accordance with the CEMP, and, in the event eelgrass is impacted, requiring mitigation for eelgrass impacts at a ratio of no less than 1.2:1, as required by the CEMP. If impacts on eelgrass are detected during the 2-year post-construction period, **MM-BIO-6** also requires the project proponent to provide additional mitigation for eelgrass impacts by transplanting eelgrass at a suitable restoration site at a ratio of 1.2:1. For similar reasons, **MM-BIO-6** would reduce **Impact-BIO-8** to less-than-significant as well.

Implementation of **MM-BIO-7** would reduce **Impact-BIO-7** to less than significant by requiring the project applicant to consult with the appropriate resource agencies, including but not limited to, NMFS (under the Magnuson-Stevens Act), USFWS (Section 7 through one or more federal permits), RWQCB (under Section 401 of the CWA), and/or USACE (under Section 404 of the CWA and Section 10 of the Rivers and Harbor Act), and to secure all applicable permits for the mitigation of in-water fill prior to waterside construction. In addition, **MM-BIO-7** requires the project applicant to implement one of the mitigation options identified in the measure to provide the minimum mitigation for in-water fill impacts at a 1:1 mitigation ratio, resulting in a less than significant impact.

MM-WQ-1 and **MM-WQ-2** are required to avoid water quality impacts from disturbing sediments. Similarly, **MM-HAZ-10** is required to ensure contaminated sediments are not released into the water column and spread beyond the current contaminated areas in the project site. As such, water quality impacts would be 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 Discussion

The terrestrial portion of the project site is fully developed, does not contain natural terrestrial habitat that could function as a native wildlife nursery site, and is characterized by many existing barriers to

wildlife movement, including human-made structures and vessel traffic. Moreover, it is surrounded completely by intensive development, and does not function as a wildlife movement corridor.

Aquatic wildlife, including fish, birds, and marine mammals, likely transit periodically through the marine environment in the project site to access foraging and resting habitat elsewhere in San Diego Bay or at sea. The project site also contains eelgrass, which is a nursery area for many commercially and recreationally important finfish and shellfish (Heck et al. 2003). As discussed under Threshold 1 and Threshold 2 above, the proposed project has the potential to affect eelgrass, open water habitat, and special-status wildlife species during construction. These impacts have the potential to substantially interfere with the movement of fish or other wildlife species or substantially impede the use of native wildlife nursery habitat and thus may result in a significant impact (**Impact-BIO-9**).

Level of Significance Prior to Mitigation

Impact-BIO-9: **Potential to Substantially Interfere with Wildlife Movement and Substantially Impede the Use of Wildlife Nursery Sites.** Aquatic wildlife, including fish, birds, and marine mammals, likely transit periodically through the marine environment in the project site to access foraging and resting habitat elsewhere in San Diego Bay or at sea. The project site also contains eelgrass, which is a nursery area for many commercially and recreationally important finfish and shellfish. The proposed project has the potential to affect eelgrass, open water habitat, and special-status wildlife species during construction. These impacts have the potential to substantially interfere with the movement of fish or other wildlife species or substantially impede the use of native wildlife nursery habitat. Impacts would be significant.

Mitigation Measures

For **Impact-BIO-9**:

Implement **MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, MM-BIO-6,** and **MM-BIO-7,** as discussed in this section**.**

Implement **MM-HAZ-1 through MM-HAZ-9**, as discussed in Section 3.5, *Hazards and Hazardous Materials*.

Implement **MM-WQ-1** and **MM-WQ-2**, as discussed in Section 3.6, *Hydrology and Water Quality*.

Level of Significance after Mitigation

As described under Thresholds 1 and 2, above, **MM-BIO-1** through **MM-BIO-6** and **MM-BIO-7** would be implemented to avoid impacts on biological resources, including on special-status species, sensitive marine habitat, and from proposed fill. Impacts would be less than significant after mitigation is incorporated.

As discussed in Section 3.5, *Hazards and Hazardous Materials*, **MM-HAZ-1** through **MM-HAZ-9** require secondary containment structures, hazards-related worker training, equipment inspection, proper equipment instrumentation, hazardous materials monitoring, oil/skill kits, barge loading procedures, removed pile placement, and removed material cleanup to significantly reduce the potential of inadvertent introduction of pollutants such as fuel, oil, and/or other industrial and mechanical fluids into waters of the U.S., either from construction sources. As a result, the potential for construction-related hazardous materials to impact bay waters is significantly diminished and impacts would be less than significant.

As discussed in Section 3.6, *Hydrology and Water Quality*, **MM-WQ-1** and **MM-WQ-2** are required to avoid water quality impacts from causing significant impacts related to turbidity, which could affect movement of marine species. After incorporation of mitigation, impacts on water quality that could affect marine wildlife movement 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 Discussion

The applicable local land use plans, policies, ordinances, or regulations of the District, adopted for the purpose of protecting biological resources, are the Port Master Plan, San Diego Unified Port District Code, and the District's INRMP. As discussed in Section 3.7, *Land Use and Planning*, the proposed project is consistent with each of these plans as well as the District's Code.

As discussed in Section 3.7, the project would not result in any changes in existing land uses. Rather, the project would result in the construction of on-site improvements that would ensure the continuation of existing use of the project site for its designated uses. NASSCO would be required to obtain all necessary approvals from agencies governing the construction of improvements on the project site, including the CCC, District, and FAA.

However, as discussed in Section 3.7, prior to mitigation, there would be a potential conflict with the San Diego Bay INRMP if the project did not minimize its biological effects associated with in-water activities including fill and sediment disturbance (see **Impact-LU-1** and **Table 3.7-3**). As such, a conflict with the San Diego Bay INRMP that results in an adverse effect on special-status species or sensitive habitat would also be considered a significant biological resource impact (**Impact-BIO-10**). Therefore, to ensure consistency with the San Diego Bay INRMP, **MM-BIO-1** through **MM-BIO-7** are required to avoid impacts on biological resources, including on special-status species, sensitive marine habitat, and from proposed fill. **MM-WQ-1** and **MM-WQ-2** are required to avoid water quality impacts from disturbing sediments. Similarly, **MM-HAZ-10** is required to ensure contaminated sediments are not released into the water column and spread beyond the current contaminated areas in the project site. Therefore, after mitigation is incorporated (see Threshold 2 within Section 3.7), **Impact-BIO-10** would be reduced to less than significant. Therefore, the proposed project would not conflict with local policies or ordinances protecting biological resources, and no impact would occur.

Level of Significance Prior to Mitigation

Implementation of the proposed project would have the potential to conflict with applicable local policies or ordinances protecting biological resources. Potentially significant impact(s) include the following.

Impact-BIO-10: Conflict with the San Diego Bay Integrated Natural Resources Management Plan. Prior to the incorporation of mitigation measures **MM-BIO-1** through **MM-BIO-7, MM-HAZ-1** through **MM-HAZ-10**, and **MM-WQ-1** and **MM-WQ-2**, a potential conflict

with the Integrated Natural Resources Management Plan could occur, resulting in potential impacts on marine wildlife, sensitive habitat, and water quality.

Mitigation Measures

For **Impact-BIO-10**:

Implement **MM-BIO-1** through **MM-BIO-7**, as described above.

Implement **MM-WQ-1** and **MM-WQ-2**, as described in Section 3.6, *Hydrology and Water Quality*.

Implement **MM-HAZ-10**, as described in Section 3.5, *Hazards and Hazardous Materials*.

Level of Significance after Mitigation

To ensure consistency with the San Diego Bay INRMP, **MM-BIO-1** through **MM-BIO-7** would be implemented to avoid impacts on biological resources, including on special-status species, sensitive marine habitat, and from proposed fill. **MM-WQ-1** and **MM-WQ-2** are required to avoid water quality impacts from disturbing sediments. Similarly, **MM-HAZ-10** is required to ensure contaminated sediments are not released into the water column and do not spread beyond the current contaminated areas in the project site. Therefore, after mitigation is incorporated, **Impact-BIO-10** would be reduced to less than significant.

Section 3.3

Climate Change, Greenhouse Gas Emissions, and Energy

3.3.1 Overview

This section describes existing conditions and applicable laws, regulations, and policies pertaining to greenhouse gas (GHG) emissions and analyzes the proposed project's potential to (1) generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment; and (2) conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Additionally, this section describes the existing conditions and regulatory setting for energy systems that serve the project site and analyzes whether proposed project 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. This section relies on the emission modeling results provided in Appendix D.

An analysis of whether the project would exacerbate sea-level rise is provided in Section 5.3.7.2 of Chapter 5, *Additional Consequences of Project Implementation*.

As discussed in Section 3.3.4.3, *Project Impacts and Mitigation Measures*, the proposed project would not result in any significant impacts related to GHGs or energy. No mitigation measures are required.

3.3.2 Existing Conditions

This section provides a discussion of the existing understanding of global climate change and its related effects, the relationship between GHG emissions and current conditions, and the existing energy resources associated with the project area.

3.3.2.1 Greenhouse Gases

Global Climate Change

The process known as the *greenhouse effect* keeps the atmosphere near the Earth's surface warm enough for successful habitation by humans and other life forms. GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), perfluorinated carbons (PFCs), sulfur hexafluoride (SF_6), and hydrofluorocarbons (HFCs), in addition to water vapor. These six gases are also identified as GHGs in Section 15364.5 of the State 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, thereby enhancing the greenhouse effect and amplifying the warming of the Earth (National Park Service 2019).

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's systems. This is collectively referred to as *climate change*. The effects 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 CO_2 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. 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.

Principal Greenhouse Gases

The GHGs listed by the Intergovernmental Panel on Climate Change (IPCC) (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) (IPCC 2014) are discussed in this section in order of abundance in the atmosphere. The principal characteristics of these pollutants are discussed below. California law and the State CEQA Guidelines contain similar definitions of GHGs (Health and Safety Code Section 38505(g); 14 California Code of Regulations [CCR] 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 project are CO_2, CH_4, and N_2O. Note that PFCs are not discussed because those gases are generated primarily by manufacturing processes, which are not anticipated as part of the project.

- **CO_2** enters the atmosphere through the burning of fossil fuels (e.g., oil, natural gas, coal), solid waste, trees, and wood products; respiration; and chemical reactions (e.g., from the manufacture of cement). CO2 is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- **CH_4** is emitted during the production and transport of coal, natural gas, and oil. CH4 is also emitted from livestock and agricultural operations as well as the decay of organic waste in municipal solid waste landfills.
- **N_2O** is emitted during agricultural and industrial activities as well as the 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 for comparing GHG emissions is the global warming potential (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 (CO_2e), which compares the gas in question to that of the same mass of CO_2 (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 the reporting guidelines, as defined in Table 3.3-1, from the United Nations Framework Convention on Climate Change (Myhre et al. 2013). The AR4 GWP values are consistent with those used in CARB's 2020 California GHG inventory, CARB's 2022 scoping plan, and the District's 2016 Maritime Air Emissions Inventory and CAP progress report (CARB 2022a; CARB 2022b; District 2018).

Table 3.3-1. Lifetimes, GWPs, and Abundances of Significant GHGs

Gas	GWP (100 years)	Lifetime (years)[1]	Atmospheric Abundance
CO_2	1	50–200	400 ppm
CH_4	25	9–15	1,834 ppb
N_2O	298	121	328 ppb

Sources: Myhre et al. 2013, Blasing 2016, IPCC 2007.

[1] Defined as the half-life of the gas.

ppm = parts per million; ppb = parts per billion.

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 3.3-1). 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 CO_2 (CARB 2017).

Recognizing their short-term lifespan and warming impact, short-lived climate pollutants are measured in terms of CO_2e 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 CO_2 emission controls. The *Short-Lived Climate Pollutant Reduction Strategy*, which is discussed in Section 3.3.3, *Laws, Regulations, 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 2017).

Greenhouse Gas Inventories

A GHG inventory is a quantification of all GHG emissions and sinks[1] 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.

[1]A GHG sink is a process, activity, or mechanism that removes a GHG from the atmosphere.

Table 3.3-2 outlines the most recent global, national, statewide, regional, and local GHG inventories to help contextualize the magnitude of potential project-related emissions. The GHG inventory from the City of San Diego, a member agency of the District, is also included.

Table 3.3-2. Global, National, State, and Local GHG Emissions Inventories

GHG Emissions Inventory	CO_2e (metric tons)
2010 IPCC Global	52,000,000,000
2020 EPA National	5,222,000,000
2020 CARB State	369,200,000
2016 SANDAG Regional	26,000,000
2019 City of San Diego	10,532,000
2016 Port of San Diego	504,554

Sources: IPCC 2014, EPA 2022, CARB 2022b, SANDAG 2021, City of San Diego 2022, District 2018.

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 District's jurisdiction that generate GHG emissions include tenant facilities (e.g., hotels, marinas, 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's most recent GHG inventory is summarized in Table 3.3-2.

3.3.2.2 Energy

California relies on a regional power system composed of a diverse mix of natural gas, petroleum, renewable, hydroelectric, and nuclear generation resources.

Petroleum: Petroleum products (gasoline, diesel, jet fuel) are consumed almost exclusively by the transportation sector, and account for almost 99 percent of the energy used in California by the transportation sector, with the rest provided by ethanol, natural gas, and electricity (Bureau of Transportation Statistics 2015). Between January 2011 and August 2020, approximately 171.5 billion gallons of gasoline and diesel fuel were purchased in California (California State Board of Equalization 2020). Gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet specific formulations required by CARB (EIA 2018).

Natural Gas: Almost two-thirds of California households use natural gas for home heating, and about half of California's utility-scale net electricity generation is fueled by natural gas (EIA 2018).

Electricity and Renewables: The California Energy Commission (CEC) estimates that 34 percent of California's retail electricity sales in 2018 will be provided by Renewables Portfolio Standard (RPS)-eligible renewable resources such as solar and wind (CEC 2019a). Additionally, the CEC's Energy Efficiency Action Plan (CEC 2019b) focuses on energy efficiency savings in new and existing buildings and reducing greenhouse gas (GHG) emissions and provides strategy recommendations for realizing these goals. The 2019 Energy Efficiency Action Plan is separated into three goals that drive energy efficiency: doubling energy efficiency savings by 2030, removing and reducing barriers to energy efficiency in low-income and disadvantaged communities, and reducing GHG emissions from the buildings sector.

Electric and natural gas services in San Diego county are provided by the San Diego Gas and Electric Company (SDG&E), a subsidiary of Sempra Energy. SDG&E operates electricity and natural gas infrastructure in the county, including power lines, power plants, pipelines, and substations. As of 2018, SDG&E procured 44 percent of its electricity from renewable sources (CEC 2019c). This project site is currently served by SDG&E.

Alternative Fuels: Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many alternative transportation fuels (e.g., biodiesel, hydrogen, electricity, and others). Use of alternative fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard, AB 32 Scoping Plan).

3.3.3 Applicable Laws, Regulations, Plans, and Policies

This section summarizes the federal, state, and local regulations related to GHG emissions, climate change, and energy resources that are applicable to the proposed project.

3.3.3.1 Federal

There is currently no overarching federal law related specifically to reductions in GHG emissions. Under the Obama administration, the U.S. Environmental Protection Agency (EPA) developed regulations under the Clean Air Act (CAA), pursuant to EPA's authority under the CAA.[2] In addition, there were settlement agreements among EPA, several states, and nongovernmental organizations to address issues related to GHG emissions from electric generating units and refineries. EPA also issued an "endangerment finding" and a "cause or contribute finding" and adopted a mandatory reporting rule and the Clean Power Plan. Under the Clean Power Plan, EPA issued regulations to control CO_2 emissions from new and existing coal-fired power plants. However, on February 9, 2016, the Supreme Court issued a stay regarding these regulations, pending litigation. EPA Administrator Scott Pruitt signed a measure to repeal the Clean Power Plan in October 2017. Therefore, no federal regulations related specifically to GHG emissions have been factored into the proposed project's impact analysis.

3.3.3.2 State

California has adopted statewide legislation to address various aspects of climate change, provide GHG mitigation, and improve energy efficiency. Much of this establishes a broad framework for the state's long-term GHG and energy reduction goals as well as the climate change adaptation program. Governors of California have also issued EOs related to the state's evolving climate change policy. Summaries of the key policies, EOs, regulations, and state legislation relevant to the project are provided below in chronological order.

Executive Order S-03-05 (2005)

EO S-03-05 was designed to reduce California's GHG emissions to (1) 2000 levels by 2010, (2) 1990 levels by 2020, and (3) 80 percent below 1990 levels by 2050.

[2] In *Coalition for Responsible Regulation, Inc., et al. v. EPA*, the U.S. Court of Appeals upheld EPA's authority to regulate GHG emissions under the CAA.

Assembly Bill 32—California Global Warming Solutions Act (2006)

AB 32 codified the state's GHG emissions target by requiring California's global warming emissions to be reduced to 1990 levels by 2020. Since being adopted, the CARB, CEC, CPUC, and California Building Standards Commission have been developing regulations that will help the state meet the goals of AB 32 and EO S-03-05. The scoping plan for AB 32 identifies specific measures for reducing 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, is 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 municipal operations and the community that are consistent with those of the state (i.e., approximately 15 percent below current levels) (CARB 2008).

California Energy Efficiency Standards for Non-Residential Buildings—Green Building Standards Code and Updates

California has adopted the Green Building Standards Code (CALGreen), which outlines aggressive energy efficiency standards for new residential and non-residential buildings that are updated every 3 years. The first standards were adopted in 1978. The most recent update was the 2019 Building Energy Efficiency Standards, which were adopted in May 2018 and took effect on January 1, 2020. Non-residential buildings will be 30 percent more energy efficient due to the update in HVAC, ventilation, and lighting standards..

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 call for the following by 2030: (1) achieving an RPS of 50 percent and (2) doubling the efficiency of existing buildings.

Senate Bill 32, California Global Warming Solutions Act of 2006: Emissions Limit, and Assembly Bill 197, State Air Resources Board, Greenhouse Gases, Regulations (2016)

SB 32 (Pavley) requires CARB to ensure that statewide GHG emissions will be reduced to at least 40 percent below the 1990 level by 2030, consistent with the target set forth in EO B-30-15. The bill specified that SB 32 shall become operative only if AB 197 (Garcia) is enacted and effective on or before January 1, 2017. AB 197 requires formation of the Joint Legislative Committee on Climate Change Policies; requires CARB to prioritize direct emissions reductions from stationary sources, mobile sources, and other sources and consider social costs when adopting regulations to reduce GHG emissions beyond the 2020 statewide limit; requires CARB to prepare reports on sources of GHGs, criteria air pollutants, and toxic air contaminants; establishes 6-year terms for voting members of CARB; and adds two legislators as non-voting members of CARB. Both bills were signed by Governor Brown in September 2016.

The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental,

energy security, environmental justice, and public health priorities (CARB 2022b). CARB adopted the 2022 Scoping Plan on December 16, 2022.

CARB released the *Final 2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on November 16, 2022. The 2022 Scoping Plan traces the pathway for the state to achieve its carbon neutrality and an 85 percent reduction in 1990 emissions goal by 2045 using a combined top down/bottom up approach using various scenarios. In addition, Appendix D of the 2022 Scoping Plan includes recommended actions for local governments to implement through the CEQA and climate action planning process to ensure local actions align with the State's climate goals (CARB 2022b).

Senate Bill 100 (2018)

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 increases the RPS in 2030 from 50 to 60 percent and establishes an RPS goal of 100 percent by 2045.

Executive Order B-55-18 (2018) and Assembly Bill 1279 (2022)

EO B-55-18 was approved by the California legislature and signed by Governor Brown in September 2018. The order establishes a statewide goal that calls for achieving carbon neutrality by no later than 2045 as well as achieving and maintaining net negative emissions thereafter. Although this EO has not been codified in law, it directs CARB to ensure that future climate change scoping plans identify and recommend measures for achieving the carbon neutrality goal. On September 16, 2022, the state legislature passed AB 1279 which codified this carbon neutrality goal for the state of achieving carbon neutrality and an 85 percent reduction in 1990 emissions level by 2045. The 2022 Scoping Plan traces the pathway for meeting this statewide goal.

Advanced Clean Cars (2022)

CARB adopted the Advanced Clean Cars II (ACC II) program in August 2022, which sets sales requirements for zero emission vehicles (ZEVs) to ultimately reach the goal of 100 percent ZEV sales in the state by 2035. The main objectives of ACC II are to maximize criteria emission reductions through increased stringency and real-world reductions, and to accelerate the transition to ZEVs through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

Executive Order E-79-20

EO N-79-20, signed in September 2020, establishes ZEV targets for the transportation sector, including 100 percent of in-state sales of new passenger cars and trucks will be ZEV by 2035, 100 percent of medium- and heavy-duty vehicles will be zero-emission by 2035 and 2045 (where feasible, depending on their use), and 100 percent of off-road vehicles and equipment will be ZEV by 2035 (where feasible). This EO also tasked CARB to develop and propose regulations that require increasing volumes of ZE passenger vehicles, medium- and heavy-duty vehicles, drayage trucks, and off-road vehicles toward their corresponding targets of 100 percent zero-emission by 2035 or 2045, as listed above. The Scoping Plan modeling reflects achieving these targets. The ACCII regulation discussed above address this EO, and the 2022 Scoping Plan includes the ZEV targets in its emissions forecast (CARB 2022b).

State CEQA Guidelines, Appendix F

Appendix F of the State CEQA Guidelines contains energy conservation measures that promote efficient use of energy for projects. To ensure that energy impacts are considered in project decisions, CEQA requires EIRs to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing any inefficient, wasteful, and unnecessary consumption of energy.

The goal outlined in Appendix F of the State CEQA Guidelines is to conserve energy through wise and efficient use. The means for achieving this goal include the following:

- Decreasing overall per capita energy consumption,
- Decreasing reliance on natural gas and oil, and
- Increasing reliance on renewable energy sources.

3.3.3.3 Regional

The AB 32 scoping plan does not provide an explicit role for local air districts with respect to 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 but also their role as CEQA lead or commenting agencies, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents. To date, the San Diego Air Pollution Control District has not developed specific thresholds of significance with regard to addressing issues related to GHG emissions in CEQA documents.

3.3.3.4 Local

San Diego Unified Port 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 was designed to achieve environmental sustainability goals at the Port, including those related to water, energy, air, waste management, sustainable development, and sustainable business practices. 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 in Section 4.3.3.2, CARB encourages local governments to adopt a reduction goal for emissions from municipal operations 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 that includes an inventory of existing (2006) and projected emissions in 2020, 2035, and 2050 and identifies the District's GHG reduction goals as well as measures to be implemented to support meeting the statewide reduction goals set forth in

AB 32 (i.e., 1990 levels by 2020). Port-wide 1990 emissions were not quantified because of gaps in activity data; instead, a base year of 2006 was used to calculate the 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.[3]

Sources throughout the District's jurisdiction that generate GHG emissions include tenant facilities (e.g., hotels, marinas, boatyards), maritime activities (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 CAP's 2020 projections and reduction targets (1990 levels) for each activity are based on growth projections specific to each tenant and activity type. For example, the CAP assumes a 5 percent annual growth in lodging-related uses between 2006 and 2020. Therefore, the CAP and its reduction targets are specific to the District's geography, type, intensity of uses, and future projected conditions. Table 3.3-3 provides the CAP's 2006 baseline, projected future (2020) GHG emissions, projected future (2020) GHG emissions with implementation of state measures, and future GHG emissions targets (i.e., 1990 levels) for the Port as a whole. 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.

A critical aspect of having a CAP that fits the criteria within State CEQA Guidelines Section 15183.5 is having reduction targets that align with statewide goals. The CAP's reduction targets parallel the state's commitment to reducing GHG emissions in AB 32 but go even farther by identifying targets for a specific location, based on projected emissions specific to the Port's geographic location as well as specific activity types and their associated sources. Therefore, because the CAP targets align with statewide goals, the CAP is consistent with AB 32.

Table 3.3-3. GHG Emissions by Emission Sector Shown in the CAP ($MTCO_2e$ per year)

Sector	2006 Existing	2020 Business as Usual	2020 with State Measures
Electricity	173,192	208,231	147,133
Natural Gas	135,516	152,803	152,534
On-Road Transportation	314,870	410,069	317,708
Off-Road Transportation	172,929	233,528	207,268
Water Use	13,166	14,630	10,406
Waste	16,757	20,439	20,439
Total Emissions	**826,429**	**1,039,700**	**855,489**
2020 Target	**—**	**745,695**	

Source: District 2013 (page 12).

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

[3] The CAP also includes projected emissions and some reduction policies to achieve the reduction target of 25 percent less than 2006 baseline levels by 2035 but does not yet quantify those reductions.

when methods are changed or refined.[4] Given this, a recalibration of the 2006 baseline was deemed vital to tracking progress toward 2020 goals. This 2006 recalibration was included in the Port's 2016 updated inventory, which was based on more locally specific and comprehensive datasets.

The 2016 inventory update provides emissions from the same sectors included in the CAP (i.e., electricity, natural gas, on- and off-road transportation, water use, waste). Table 3.3-4 provides a comparison of the recalibrated 2006 baseline and emissions generated during 2016. Total GHG emissions produced by all tenant, maritime, and Port activities in 2016 were estimated to be 507,823 $MTCO_2e$, which is 13 percent below the revised 2006 baseline (or 73,856 $MTCO_2e$). This decrease in emissions is due to several factors, including fewer calls from ocean-going vessels, reduced berthing durations, increased fuel economy for on-road vehicles, decreases in natural gas consumption, and a decrease in the SDG&E electricity emission factor. The 2016 inventory is approximately 2.0 percent of total regionwide GHG emissions (relative to SANDAG's most recent inventory of 2016).[5]

Table 3.3-4. Comparison of Recalibrated 2006 Baseline and Calendar Year 2016 Emissions ($MTCO_2e$ per year)

Sector	Revised 2006	2016 Inventory
Electricity	117,526	101,381
Natural Gas	162,556	137,183
On-Road Transportation	136,619	124,957
Off-Road Transportation	132,571	113,812
Water Use	13,169	9,144
Waste	19,239	21,346
Total Emissions	**581,680**	**507,823**
2020 Target	**523,512**	
Change from CAP 2006 Due to Recalibration	*(244,749)*	N/A

Source: District 2018.

3.3.4 Project Impact Analysis

3.3.4.1 Methodology

GHG impacts associated with construction of the proposed project were assessed and quantified, to the extent feasible, using industry standards and accepted software tools, techniques, and emissions factors. A summary regarding the methodology is provided below. A full list of assumptions and emissions calculations can be found in Appendix D. The methodology used to estimate GHG emissions is the same methodology that was used to estimate air pollutant emissions, as described in Section 3.1, *Air Quality and Health Risk*. In addition to the emissions sources discussed in Section 3.1, GHG emissions would also result from electricity, natural gas, water consumption, and waste generation.

The project would not result in an expansion of the existing use of the site or an increase in shipbuilding and repair operations. Moreover, additional employees would not be needed once construction is

[4] California Air Resources Board. 2022. *Current California Emission Inventory Data*. Available: https://www.arb.ca.gov/cc/inventory/data/ data.htm.
[5] GHG emissions in the San Diego region in 2016 were 26 million $MTCO_2e$ (SANDAG 2021).

completed and the project is operational. Thus, the project would not include components that would induce growth or change the use of the site, and no quantitative operational analysis is included.

Construction GHG Emissions

Implementation of the proposed project would include construction necessary to replace NASSCO's floating dry dock and perform other structural repair and replacement activities as part of waterfront infrastructure improvements. Intermittent construction would consist of as-needed structural repair and replacement of existing structural piles throughout the leasehold, including those that support Berths 2, 3, 4, 5, 6, and Pier 12, the floating dry dock approach pier, and the Berth 1 Platform. The existing steel-jacketed concrete piles, concrete-filled steel pipe piles, and H-piles show signs of deterioration, cracking, corrosion, and wear.

Construction of the proposed project would generate CO_2, CH_4, and N_2O, all of which are GHGs that that could contribute to climate change. Emissions would originate from construction of landside and waterside components. Sources of emissions associated with landside activities include exhaust from off-road equipment as well as exhaust from employees' vehicles and haul trucks (i.e., on-road vehicles). Sources of emissions associated with waterside activities include diesel pile drivers and exhaust from tugboats and barges that will be used to store and move equipment, materials, and personnel around the project site.

The methods used to estimate emissions from construction of the proposed project are described in detail in Section 3.1, *Air Quality and Health Risk*. Emissions estimates were based on a combination of project-specific construction data (e.g. schedule, equipment types and numbers, and truck volumes) provided by the project proponent and industry standard and accepted software tools, techniques, and emission factors. Construction emissions from equipment, including cranes and pile drivers were estimated using equipment emission factors and emission formulas from the California Emissions Estimator Model (CalEEMod), version 2022.1. Emissions from trucks and worker commutes were estimated using a combination of emission factors and methodologies from CalEEMod and emission factors from CARB's EMFAC 2021 model. Emissions associated with the tugboats and the barges were estimated using emission rates from CARB's most recent harbor craft emissions inventory (CARB 2022c). During construction, minor spot welding of mild steel may occur, and would be limited to two specific locations within the construction area. While welding would occur over the construction period, there are no GHG emissions associated with welding operations. Any emissions would be associated with landside equipment, which are included in this analysis.

The amount of emissions generated on an annual basis from landside and waterside construction would vary, depending on the intensity and types of activities occurring simultaneously, as well as the phasing and schedule. For purposes of analysis, construction activities would occur 24 hours per day and seven days per week, with construction work during evening and nighttime hours (between 7:00 p.m. and 7:00 a.m.) limited to project deliveries, formwork, welding, and other activities less intense activities. Note that the anticipated construction schedule analyzed herein is approximate and is provided for analysis purposes, and the actual start and end dates may vary. While overall construction timing may vary and may occur later than assumed here, is it assumed the sequence of phases relative to other phases and activities would not change. If the schedule is delayed, then concurrent elements would still occur concurrently (i.e., phase overlaps would be the same, albeit at a later date). Consistent with established protocols and published guidance from other lead agencies and air districts, construction emissions are amortized over an expected 30-year operational life of the project.

Operational GHG Emissions

As discussed in Chapter 2, Section 2.2.6, *Project Operation*, the proposed project would not change the nature or extent of existing operations at the project site. The proposed project would not expand operations or result in additional employment or vehicle trips compared to existing conditions. The new floating dry dock and associated infrastructure would enable NASSCO employees to continue their existing shipbuilding and repair operations under safe working conditions. In addition, the new temporary Lot 20 position would improve the efficiency of NASSCO's shipbuilding operations and reduce the hours tugboats operate due to reduced complexity associated with moving the drydock into the temporary position during vessel launches. The project would not result in an expansion of the existing use of the site, an increase in shipbuilding and repair operations, or additional employees beyond those needed during construction. Because long-term operational changes are minimal, operational emissions are discussed qualitatively.

Energy Use

Implementation of the proposed project would result in energy use from construction of the landside and waterside components. Energy use associated with construction equipment activities includes the operation of off-road equipment (including pile drivers and cranes) as well as employees' vehicles and haul trucks. To haul materials and move equipment around the project site, construction of the waterside components would require energy for operation of the barges and tugboats.

Energy use during construction was estimated using a combination of emission methods and emissions factors from published best available documentation. Energy usage associated with fuel consumption was calculated by converting the GHG emissions estimated for the GHG analysis using default emission factors (Climate Registry 2022) and fuel economy from EMFAC. A full list of assumptions and emissions and energy calculations for project construction can be found in Appendix D.

3.3.4.2 Thresholds of Significance

Greenhouse Gases

Based on guidance provided in Appendix G of the State CEQA Guidelines, the proposed project would result in a significant impact if it were to:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The State CEQA Guidelines do not indicate what level of GHG emissions would constitute a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance that were previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds was 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.

This general direction from Section 15064.4 gives rise to three different approaches for assessing the significance of GHG-related impacts. The first two bullet points above could be satisfied through reliance on a quantitative comparison of project emissions to numerical emissions-based thresholds. The third bullet is more qualitative in nature in evaluating the project's consistency with statewide, regional, or local plans and reduction targets. Several agencies in the state, including multiple air districts, have drafted and/or adopted various threshold approaches and guidelines for analyzing GHG emissions and climate change in CEQA documents. However, none of these are binding and are only recommendations for consideration by CEQA lead agencies. A discussion of the threshold approaches is provided below. .

Threshold Approach

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 alternative approaches does exist.

Based on the available threshold concepts recommended by air districts or other lead agencies and recent case law, the thresholds of significance that would be applied to the proposed project's GHG emissions include the two following steps:

- **Comparison to a Relevant Bright-Line Criterion.** A numerical bright-line value, based solely on District-wide projects, does not yet exist. Moreover, no bright-line criterion has been formally adopted by an air district or other lead agencies for use in the San Diego region. However, air districts in other parts of the state have developed criteria for evaluating construction-related GHG emissions.. For instance, the Bay Area Air Quality Management District (BAAQMD) and the Sacramento Metropolitan Air Quality Management District (SMAQMD) have developed criteria for evaluating GHG emissions in CEQA projects, but differ in the recommended approach for evaluating construction emissions. BAAQMD guidance is qualitative in nature, and is intended ensure that projects constructed and operated within their jurisdiction do their fair share to contribute to the state's long-term GHG reduction target of carbon neutrality by 2045. The BAAQMD guidance does not recommend a specific numerical threshold for evaluating construction GHG emissions, as emissions from construction represent a very small portion of a project's lifetime GHG emissions. Instead, the BAAQMD relies on operational design elements as the threshold of significance for land use projects (BAAQMD 2022) Alternatively, SMAQMD recommends that an 1,100 $MTCO_2e$ be applied as a bright-line threshold of significance for evaluating construction emissions of GHGs (SMAQMD 2021). Additionally., the 900 $MTCO_2e$ screening criteria presented in a California Air Pollution Control Officers Association (CAPCOA) white paper from 2008 is the lowest numerical criteria drafted, recommended, or adopted in the

state and serves as a conservative screening criterion for determining which projects require further analysis and identification of project design features or potential mitigation measures with regard to GHG emissions (CAPCOA 2008). The CAPCOA threshold of 900 $MTCO_2e$ per year represents a more conservative threshold than has been approved by other air districts in compliance with 2030 statewide reduction targets; therefore, the 900 $MTCO_2e$ per year threshold is used in this analysis.

- **Consistency with Statewide Regulatory Programs**. At the state level, CARB's 2022 Scoping Plan outlines the framework and strategies the state will take to achieve its emissions reduction targets. The 2022 scoping plan update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities (CARB 2022b). Moreover, the 2022 Scoping Plan directs municipalities to prioritize three key areas in the focus on decarbonization: transportation electrification, VMT reduction, and building decarbonization. While the proposed project is not a traditional land use development (e.g., residential or commercial) project with traditional uses (e.g., building energy, passenger car VMT), the construction of the proposed project would allow the facility to modernize its electrical infrastructure in an effort to replace diesel combustion with electricity. In addition to 2022 scoping plan, several CARB and statewide regulations address GHG emissions from other sources that are not fully covered by the scoping plan, such as off-road equipment. These regulations are addressed in detail in Section 3.3.3.2, *State*. In addition to the quantitative analysis discussed in the bullet point above, the project is evaluated for its consistency with adopted regulations, plans, and policies aimed at reducing GHG emissions, including the 2022 scoping plan and those adopted by CARB or other California agencies for the purpose of reducing GHG emissions, and the District's CAP and other emission reducing activities.

Energy Consumption

The following significance criteria, which are based on the questions in Appendix G of the State CEQA Guidelines, provide the basis for determining the significance of energy impacts associated with the proposed project. Impacts would be considered significant if the proposed project were to result in any of the following.

1. Result in a potentially significant environmental impact due to the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; or
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

For this analysis, these two questions from Appendix G are combined under Threshold 3 in Section 3.3.4.3, below.

According to Section 15126.2(b) of the State CEQA Guidelines, if analysis of a project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption use of energy, or wasteful use of energy resources, the EIR must mitigate that energy use. Guidance is presented in State CEQA Guidelines Appendix F.

According to Appendix F of the State CEQA Guidelines, the goal of conserving energy implies the wise and efficient use of energy. The means for achieving this goal include:

1. Decreasing overall per capita energy consumption;

2. Decreasing reliance on fossil fuels such as coal, natural gas, and oil; and
3. Increasing reliance on renewable energy sources.

3.3.4.3 Project Impacts and Mitigation Measures

Threshold 1: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Discussion

As noted in Section 3.3.4.1, *Methodology,* GHG emissions would result from construction of the proposed project, and thus there is the potential for significant impacts. GHG emissions associated with construction are quantified (to the extent feasible) and presented herein.

Construction is broken up between emissions sources that operate on land, both within the project boundary and on public roadways, and emissions sources that operate completely on or in the water, both within and outside of the construction area. GHG emissions during construction would result from the use of off-road equipment (including cranes and pile drivers) as well as vehicles belonging to employees who commute and trucks that import and haul construction materials. Waterside GHG emissions during construction would result from the use of tugboats and barges.

Construction of the proposed project is expected to begin in 2024 and be completed by 2034.[6] Table 3.3-5 summarizes the estimated GHG emissions by construction phase. Project construction emissions, when amortized over 30 years, would be 128 $MTCO_2e$ per year and would average out to 349 $MTCO_2e$ per year over the construction duration. This level of emissions is far below both the 900 $MTCO_2e$ per year screening level from CAPCOA and the 1,100 $MTCO_2e$ per year threshold level from SMAQMD. Thus, this impact would be less than significant, and no mitigation is required.

Table 3.3-5. Estimate of Construction GHG Emissions by Phase

Year	Total $MTCO_2e$
Floating Dry Dock Replacement and Modification	1,631
Repair Complex Wharf Improvements	817
Quay Wall Revetment Repairs	149
As-needed Quay Wall Revetment Repairs	184
Structural Pile Repair and Replacement	1,054
Mobilization/Demobilization	9
Total Emissions	3,843
Amortized Construction Emissions	128
Average Annual Construction Emissions	349

Source: Appendix D.

Note: Totals may not add up exactly because of rounding.

[6] The anticipated construction schedule is approximate and is provided for analysis purposes. The actual start and end dates for construction of the project components may vary, but the duration is not anticipated to change.

Operational energy use is anticipated to be reduced when compared to existing conditions, thereby reducing operation-related GHG emissions. Specifically, the new temporary Lot 20 position for the floating dry dock would improve the efficiency of NASSCO's shipbuilding operations and reduce the hours tugboats operate because of the mechanical type of mooring system that would be implemented on the new dry dock. The system minimizes the need for mooring lines, which results in a more efficient relocation when launching newly constructed vessel from the Ways and Building Dock, resulting in less tug operations to position the floating dry dock.. As such, the proposed project would result in reduced energy consumption associated with tug trips during operations when compared to existing conditions. In addition, the diesel generators on the new floating dry dock would be U.S. EPA Tier 4-rated and would be outfitted with a closed-loop cooling water system. These new engines would improve energy efficiency when compared with existing Tier 0 diesel engines. Moreover, the new floating dry dock would be outfitted with an extensive electrical distribution system, as well as a modern electric salt water pumping system to minimize the need for portable diesel salt water pumps, which would further improve energy efficiency. Lastly, the new Repair Complex Wharf would create a centralized laydown area to support ship repair operations in the vicinity of the floating dry dock. This centralized laydown area is anticipated to reduce the distance of forklift trips, and associated energy consumption, throughout the shipyard when compared with existing conditions.

As discussed in Chapter 2, *Environmental Setting and Project Description*, the purpose of the project is to modernize the NASSCO shipyard facility by replacing existing deteriorating infrastructure with modern equipment and facilities. The project is primarily a construction project, as long-term emissions sources are not expected to change and may decrease, as equipment and tugboat times are expected to decrease once construction is complete. While construction and its associated emissions would result in a short-term increase within the project area, long term the NASSCO facility is expected to be more efficient (see Chapter 2, Section 2.2.6), reducing resource consumption and emissions over the life of the NASSCO lease.

Level of Significance Prior to Mitigation

The proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Threshold 2: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Discussion

The determination of significance herein is based on whether the proposed project conflicts with either the District's CAP and the relevant statewide regulatory programs. A measure or program was

determined to be relevant and applicable if it contained elements that, based on the proposed project details, were a reasonably foreseeable part of the proposed project. If the project does not conflict with these programs and measures, then the project is not expected to impede state and local efforts established for the purpose of reducing GHG emissions.

Reducing GHG emissions in California has been the focus of the State government for approximately two decades (CARB 2020b). GHG emission targets established by the State legislature include reducing statewide GHG emissions to 1990 levels by 2020 (AB 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (SB 32 of 2016). EO S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. EO B-55-18 calls for California to achieve carbon neutrality no later than 2045 and achieve and maintain net negative GHG emissions thereafter. These targets align with the scientifically established levels needed globally to limit the rise in global temperature to no more than 2°C, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected. These targets also align with efforts to limit the temperature increase even further to 1.5°C (UN 2015:3).

The 2022 Scoping Plan, prepared by CARB, outlines the main strategies California intends to implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2022). The plan identifies the reductions needed by each GHG emission sector including transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste. The 2022 Scoping Plan lays out the pathway to achieve the state's carbon neutrality goal and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045. The 2022 Scoping Plan relies on significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon (CARB 2022b). The State has also passed more detailed legislation addressing GHG emissions associated with industrial sources, transportation, electricity generation, and energy consumption. CARB and other agencies are charged with implementing regulations that achieve the reduction goals on a statewide basis, including through increased building efficiency (through California Building Code updates) and vehicle efficiency (through truck and car rulemaking), among other things. Those statewide regulations apply to ensure local construction and operation increase efficiencies toward achievement of statewide GHG emissions reduction goals.

The Local Actions Appendix (Appendix D) to the 2022 Scoping Plan includes various recommendations that local governments can implement to align their planning and development review processes with the State's climate goals. The guidance recommends that local governments focus on transportation electrification, VMT reduction, and building decarbonization (CARB 2022d).

As described in Section 3.1.2.4 in Section 3.1, *Air Quality and Health Risk,* NASSCO has implemented various strategies to reduce GHG emissions and resource consumption, including widespread use of zero emission cranes in production operations with more than 90% of the shipyard cranes powered by electricity, replacing a stationary diesel-powered compressor with an electric compressor, and implementing requirements that contractors use only zero or near-zero emission portable compressors when working in the shipyard. As described in Chapter 2, *Project Description*, the project would support these GHG emission reduction efforts by supporting further electrification of the NASSCO facility. Two 50-ton electric wing wall cranes would be installed to support ship repair operations. The new floating dry dock would be outfitted with an extensive electrical distribution

system in an effort to reduce the quantity of temporary diesel air compressors utilized for production operations, as well as a modern electric salt water pumping system to minimize the need for portable diesel salt water pumps. Moreover, the project would not result in additional shipbuilding and repair operations or additional employees beyond those needed during construction. Thus, the project would not conflict with the 2022 Scoping Plan.

At the local level, the District adopted its CAP in December 2013 and identified the District's reduction goals and measures to be implemented to achieve the reduction goals set forth in AB 32 and long-term goals beyond 2020. The CAP includes an inventory of existing (2006) and projected emissions in 2020, 2035, and 2050, as well as strategies to meet the District's goal of reducing annual GHG emissions to 25 percent below 2006 levels by 2035 (San Diego Unified Port District 2013). To achieve the Port's goals, the CAP details various GHG reduction measures related to transportation and land use, alternative energy generation, energy conservation, waste reduction and recycling, water conservation, and recycling. Therefore, AB 32, SB 32, AB 1279, and the District's CAP represent the most applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions.

The District's CAP meets the criteria within State CEQA Guidelines Section 15183.5 by providing reduction targets that align with statewide goals. A critical aspect of having a CAP that fits the criteria within State CEQA Guidelines Section 15183.5 is having reduction targets that align with statewide goals. Because the Port's reduction targets outlined in the CAP parallel the State's commitment in AB 32, and aligns with statewide goals to reduce GHG emissions, the CAP is consistent with AB 32. While the Port's CAP includes a long-term 2035 goal, it does not include post-2020 reduction quantification. Therefore, the CAP cannot be used as a qualified plan for reduction of GHG emissions pursuant to Section 15183.5 of the CEQA Guidelines for projects with a post-2020 buildout date.

Plans, policies, and regulations adopted for the purpose of reducing GHG emissions were developed with the intent of reducing cumulative emissions related primarily to long-term operational emissions. As described previously, the project would not result in a considerable increase in GHG emissions as a result of construction activities, which would temporarily generate GHG emissions below the 900 $MTCO_2e$ threshold. The proposed project would not increase operational shipbuilding/repair capacity at the project site and would, therefore, not result in a long-term increase in GHG emissions. In fact, the repair and replacement of the dry dock and other infrastructure would increase efficiency by reducing transit distances and fuel consumption associated with moving the dry dock, thus lowering operational GHG emissions at the project site. Other CAP GHG reduction measures, such as reducing building energy use, relying more on alternative energy generation, as well as reductions in water use and waste generation, are not applicable to the currently proposed project. The current project would therefore be consistent with GHG reduction goals and efficiency requirements of the District's CAP, as well as statewide planning efforts, and would not result in a permanent increase in GHG emissions. Thus, the project would not conflict with any applicable plan, policy, or regulation adopting for the purpose of reducing emissions of GHGs. This impact would be less than significant, and no mitigation is required.

Level of Significance Prior to Mitigation

The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Threshold 3: Would the Project: (1) result in a potentially significant environmental impact due to the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; or (2) conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Discussion

Wasteful, Inefficient, or Unnecessary Consumption of Energy

CEQA requires a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

Thresholds that define when energy consumption is considered wasteful, inefficient, or unnecessary have not been established in federal or state law or in the State CEQA Guidelines. Compliance with the California Energy Code would result in energy-efficient buildings. However, compliance with building codes alone does not adequately address all potential energy impacts during construction. For example, energy would be required to transport people and goods to and from the project site. Energy use is discussed further below.

Energy would be required to operate and maintain construction equipment and for the transport of construction materials by barge and haul truck. The one-time energy expenditure required to repair and replace the existing physical facilities and infrastructure associated with the proposed project would be nonrecoverable. Most energy consumption would result from operation of off-road construction equipment and on-road vehicle trips associated with construction, worker commute trips, vendor haul truck trips, and barge mobilization.

The energy consumption associated with proposed project construction by year was estimated using CalEEMod Version 2020.4.0 (CAPCOA 2021). Fuel usage of tugboats utilized to mobilize the spud and derrick barges, barge propulsion engines, and barge generator sets during construction was estimated using the CARB's harbor craft inventory (CARB 2022c) and CO_2 diesel emissions factor (10.21 kilograms-CO_2 per gallon). Refer to Appendix D for specific input parameters and modeling output results. Most of the construction-related energy consumption would be associated with off-road equipment, worker vehicle trips, and the transport of equipment and waste using barges and on-road haul trucks during construction. Average annual energy consumption during project construction is presented in Table 3.3-1.

Table 3.3-1 Total Estimated Construction Energy Consumption

	Total Gallons During Construction Period				
Energy Type	**Equipment**	**Trucks**	**Marine**	**Workers**	**Total**
Gasoline	-	-	-	16,208	16,208
Diesel	237,257	20,828	98,713	-	356,798

Source: Calculations performed by Ascent Environmental in 2023

Once operational, the project site would continue to be served by SDG&E. No new or expanded service is proposed. Rather, operational energy use is anticipated to be reduced when compared to existing conditions. Specifically, the new temporary Lot 20 position for the floating dry dock would improve the efficiency of NASSCO's shipbuilding operations and reduce the hours tugboats operate because of the mechanical type of mooring system that would be implemented on the new dry dock. The system minimizes the need for mooring lines, which results in a more efficient relocation when launching newly constructed vessel from the Ways and Building Dock, resulting in less tug operations to position the floating dry dock and reduced energy use. In addition, the diesel generators on the new floating dry dock would be U.S. EPA Tier 4-rated and would be outfitted with a closed-loop cooling water system. These new engines would improve energy efficiency when compared with existing Tier 0 diesel engines. Moreover, the new floating dry dock would be outfitted with an extensive electrical distribution system, as well as a modern electric salt water pumping system to minimize the need for portable diesel salt water pumps, which would further improve energy efficiency. Lastly, the new Repair Complex Wharf would create a centralized laydown area to support ship repair operations in the vicinity of the floating dry dock. This centralized laydown area is anticipated to reduce the distance of forklift trips, and associated energy consumption, throughout the shipyard when compared with existing conditions. Thus, operational emissions would not result in wasteful, inefficient, and unnecessary consumption of energy resources. This impact would be less than significant.

Conflict with or Obstruct Renewable Energy or Energy Efficiency Plans

State and local renewable energy and energy efficiency plans that are applicable to the proposed project include California Title 24 energy efficiency standards, the State of California Energy Action Plan, which contain required standards related to energy efficiency for buildings and renewable energy development (CEC 2019b), the District's CAP, which includes strategies to reduce GHG emissions, and SANDAG's Regional Energy Strategy, which establishes long-term energy goals in the region through 2050, including energy efficiency, renewable energy, distributed generation, transportation fuels, land use and transportation planning, border energy issues, and the green economy. The proposed project is required to comply with these plans, to the extent applicable, all of which are aimed at increasing energy efficiency and renewable energy development. Because the project is expected to result an increase in fuel efficiency with no other changes in operations, the project would not conflict with state or local long-term renewable energy or energy efficiency plans.

Energy to meet the project's construction electricity demand would be provided by the San Diego Gas and Electric Company (SDG&E), which is subject to meeting California's RPS. SDG&E plans to increase procurement from eligible renewable energy resources to 44 percent of retail sales by December 31, 2024; 52 percent of retail sales by December 31, 2027; 60 percent of retail sales by December 31, 2030, and 100 percent carbon-free by 2045 (SDG&E 2022). For these reasons, the project would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, this impact would be less than significant.

Level of Significance Prior to Mitigation

Implementation of the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy that could result in potentially significant environmental effects, nor would it conflict with state and local renewable energy and energy efficiency plans. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

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Section 3.4
Geology and Soils

3.4.1 Overview

This section describes the existing conditions and applicable laws, regulations, plans, and policies for geology and soils, followed by an analysis related to the project's potential to: (1) cause substantial adverse effects involving seismic-related ground failure, including liquefaction and (2) be located on an unstable geologic unit or soil and result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Other potential geology and soils issues, such as impacts related to adverse effects from earthquake fault rupture, seismic ground shaking, or landslides; substantial soil erosion or loss of topsoil; expansive soils; soils incapable of supporting wastewater disposal systems; and destruction of unique paleontological resources or geologic features were analyzed in Section 4.7 of the Environmental Initial Study Checklist (see Appendix C). The project was determined to have no impact or a less-than-significant impact in those issue areas. The analysis and conclusions regarding these impacts are also summarized in Section 5.3, *Effects Not Found to Be Significant*, of this Draft EIR.

The information in this section is based in part on the *Geotechnical Investigation, New Large Floating Dry Dock, General Dynamics-NASSCO Shipyard, San Diego, California* (*Geotechnical Investigation*) prepared for the project by TerraCosta Consulting Group (TerraCosta Consulting Group 2020), which is included as Appendix I. The *Geotechnical Investigation* evaluated the following project components: the sheet-pile bulkhead supported by precast concrete batter piles; the triangular-shaped wharf supported by octagonal vertical precast concrete piles and associated fender system; the dry dock approach fenders; the dry dock mooring dolphins; the catwalk support to access the floating dry dock while moored in its temporary position; and the shoreline repairs between Berths 2 and 6. Although the *Geotechnical Investigation* focused on shoreline repairs between Berths 2 and 6, similar conditions are anticipated along the quay walls throughout the entire NASSCO leasehold. The *Geotechnical Investigation* presents recommendations pertaining to the various geotechnical aspects of the proposed improvements based on the results of field investigation, laboratory testing, and engineering analyses of the subsurface conditions at the project site.

As described in Section 3.4.4.3, *Project Impacts and Mitigation Measures*, the proposed project would have a potentially significant impact related to geology and soils. A mitigation measure is required to reduce impacts to less than significant.

3.4.2 Existing Conditions

The following section describes the existing geologic and soil conditions and related hazards within the project area. Unless otherwise indicated, the information in this section is based on the *Geotechnical Investigation*.

3.4.2.1 Geologic Setting and Soil Conditions

Regional Geology

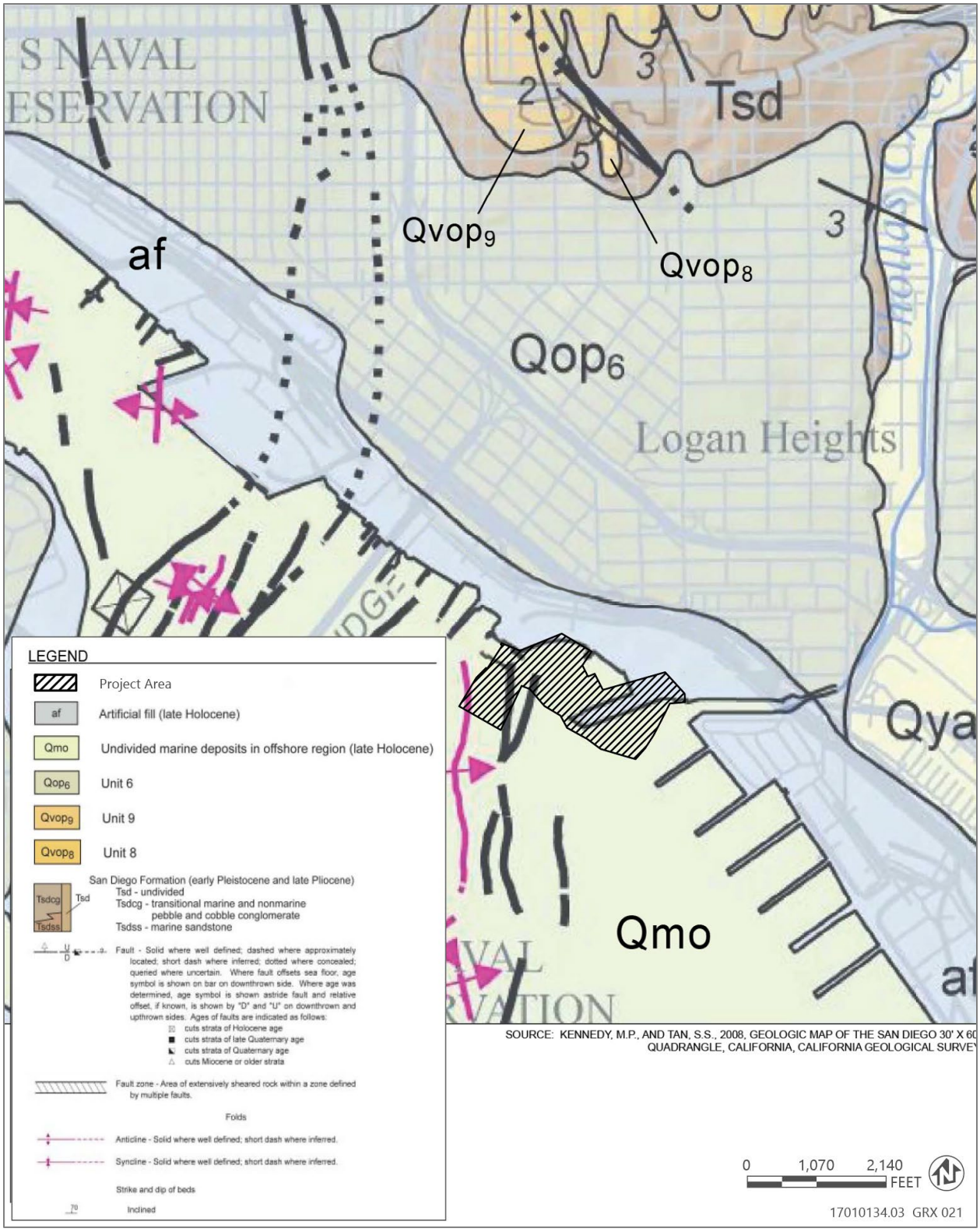
The project site is within the Peninsular Ranges Geomorphic Province. Easterly of the site lies the dissected San Diego coastal plain, which abuts the San Ysidro and Jamul Mountains. Carved out along the westerly margin of Otay Mesa (and the San Diego coastal plain) is a series of coastal terraces formed at various sea level still stands during Pleistocene time. Regional uplift, faulting, and erosion have modified these distinctive erosional features. Over the last million years, the San Diego region is estimated to have risen at an average rate of about 5.5 inches per 1,000 years. In the last 80,000 years, the rate of uplift has increased to nearly 12 inches per 1,000 years northwest of the Rose Canyon fault zone, and approximately 18 inches per 1,000 years southwest of the Rose Canyon fault zone.

Conversely, these tectonic forces have also caused down-dropping of the region within San Diego Bay. Following the Rose Canyon fault zone southerly, tectonic forces are spread across three major faults (and quite possibly other unidentified faults) that underlie San Diego Bay. These faults (the Silver Strand, Coronado, and Spanish Bight Faults) are believed to transfer tectonic forces to the Descanso Fault, which extends from offshore of Point Loma and continues southerly into Mexico. The right step that occurs between the Rose Canyon and the Descanso fault zones creates a releasing bend that causes the rocks underlying the bay to be stretched and down-dropped to accommodate the movement caused by these tectonic forces. Typical movements along the faults that underlie the bay are observed to experience a significant vertical or normal component to their movement.

From the standpoint of the overall geologic structure, San Diego Bay is a down-dropped faulted trough lying just west of a stable hinterland-coastal plain. Bedrock on the east side of the zone has been slightly deformed as opposed to that on the west side. Faults to the east (i.e., La Nacion-Sweetwater Faults) display down-to-the-west normal displacement. The Rose Canyon system exhibits right-slip (lateral) displacement and is believed to represent a portion of the motion between the North American and Pacific Tectonic Plates. The normal faults that parallel the margins of the bay are likely a result of stretching, subsidence, and compaction of the sedimentary deposits within the San Diego Embayment.

Project Site Geology

The local surface geology of the project area is shown in Figure 3.4-1. An approximately 750-foot to 1,000-foot-wide strip of artificial fill was placed adjacent to the bayshore, including the existing landward portion of the NASSCO shipyard. The fill was most likely derived by a combination of dredging of the harbor floor and locally derived fill soils. The thickness of the fill is estimated to be very thin at its eastern edge. The thickness toward the bay end likely reaches approximately 8 to 12 feet adjacent to the revetment, existing Repair Complex Wharf, and crane rail extension bridge. The fill is underlain with young Holocene-age unconsolidated bay sediments that are generally known to extend to an elevation of approximately -32 feet mean lower low water (MLLW). As subsidence occurred in the bay, sediment was flushed out of the uplands and was slowly deposited over older Pleistocene-age sediments, leaving the terrace deposits (including both the older and younger quaternary deposits) that mantle the coastal terraces around San Diego Bay.



Source: California Geological Survey 2008

Figure 3.4-1. Geologic Map of the Project Area

Overlying the San Diego Formation are Quaternary-age terrace deposits. These nearshore marine and non-marine deposits are generally composed of interbedded fine- to medium-grained, poorly to moderately consolidated silts, sands, and conglomerate. The sands vary from well to poorly sorted. The Quaternary-age deposits were deposited on wave cut platforms (terraces) eroded into the Pliocene-age San Diego Formation. This old surface is estimated to extend offshore to a depth locally in excess of 150 feet below present sea level. Where exposed inland, the San Diego Formation consists of semi-consolidated fossiliferous fine-grained yellow-white/gray sandstone, with well-rounded cobble conglomerate lenses. As the San Diego Formation extends southerly to Mexico, it reaches at least an estimated thickness of 300 feet. It is estimated that the top of the San Diego Formation is near elevation -150 feet MLLW.

Historic dredging of the basin for the existing floating dry dock resulted in an excavation bottom of approximately -55 feet MLLW. Since that time, other minor dredging operations have also taken place within the vicinity of the NASSCO shipyard. Within the area that was dredged, recent bay deposits generally form a relatively thin (approximately 3- to 7-feet thick) veneer covering the previously dredged surface of the bay floor.

Soil Conditions

The following materials were encountered during exploratory borings completed as part of the *Geotechnical Investigation*:

- San Diego Formation: The top of the San Diego Formation in the project area is estimated to be near elevation -150 feet MLLW. The San Diego Formation typically consists of yellow-brown to gray-brown, fine- to medium-grained, poorly to moderately indurated sands and siltstones. The San Diego Formation is described as being late Pliocene to early Pleistocene in age, covering an area from the southerly flanks of Mount Soledad south to Rosarito Beach in Baja California, Mexico.
- Older Quaternary Deposits: The older terrace deposits generally consist of olive-brown to gray-brown, dense to very dense silty sands, stiff to hard sandy silts, clayey silts, and silty clays of varying plasticity. These deposits are likely partially derived from the underlying San Diego Formation and were encountered at depths ranging from approximately -60 feet to -85 feet MLLW.
- Younger Quaternary Deposits: Younger quaternary-aged terrace deposits cover much of San Diego's coastline and generally include a series of middle to late Pleistocene-age paralic deposits derived from the local formational soils. Within the project area, these deposits generally consist of interbedded, medium dense, red-brown to olive-brown sands, silty fine sands, fine sandy to clayey silts, silty to fine grained sandy clays, and isolated layers of highly plastic clays. These deposits were generally encountered at depths ranging from approximately -37 feet to -55 feet MLLW. Variations in the depths at which the younger Quaternary deposits were encountered are due to historic dredging that took place associated with development of the shoreline and shipyard. Near the existing Repair Complex Wharf, younger terrace deposits were encountered near elevation -32 feet MLLW.
- Bay Deposits: Bay deposits that were encountered generally consist of loose to medium dense, gray, micaceous silty sand with occasional shell fragments, gravels, and soft clayey silt lenses. These bay deposits generally form a relatively thin (3- to 4-feet thick) veneer covering the previously dredged surface of the bay floor. Outside the limits of the historic dredging, these bay deposits extended to an approximate elevation of -32 feet MLLW.

Groundwater

Due to tidal fluctuations, groundwater levels may periodically reach a maximum of +8 feet MLLW within the project site.

3.4.2.2 Site-Specific Geologic Hazards

The geologic hazards in the project area are shown on Figure 3.4-2 and summarized in the following sections.

Faulting and Seismicity

According to the California Geologic Survey (CGS) California Earthquake Hazards Zone Application map, the project site is not within an earthquake fault zone. The nearest active Alquist-Priolo fault zone is the Point Loma Fault Zone, located approximately 0.6 mile northwest of the project site (CGS 2021). Therefore, the risk associated with ground rupture is considered low. The project site is within a seismically active region and is located approximately 1,800 feet south-southeast of the Silver Strand Fault, which has demonstrated fault activity during the last 10,000 years. The risk associated with ground shaking at the project site is very high.

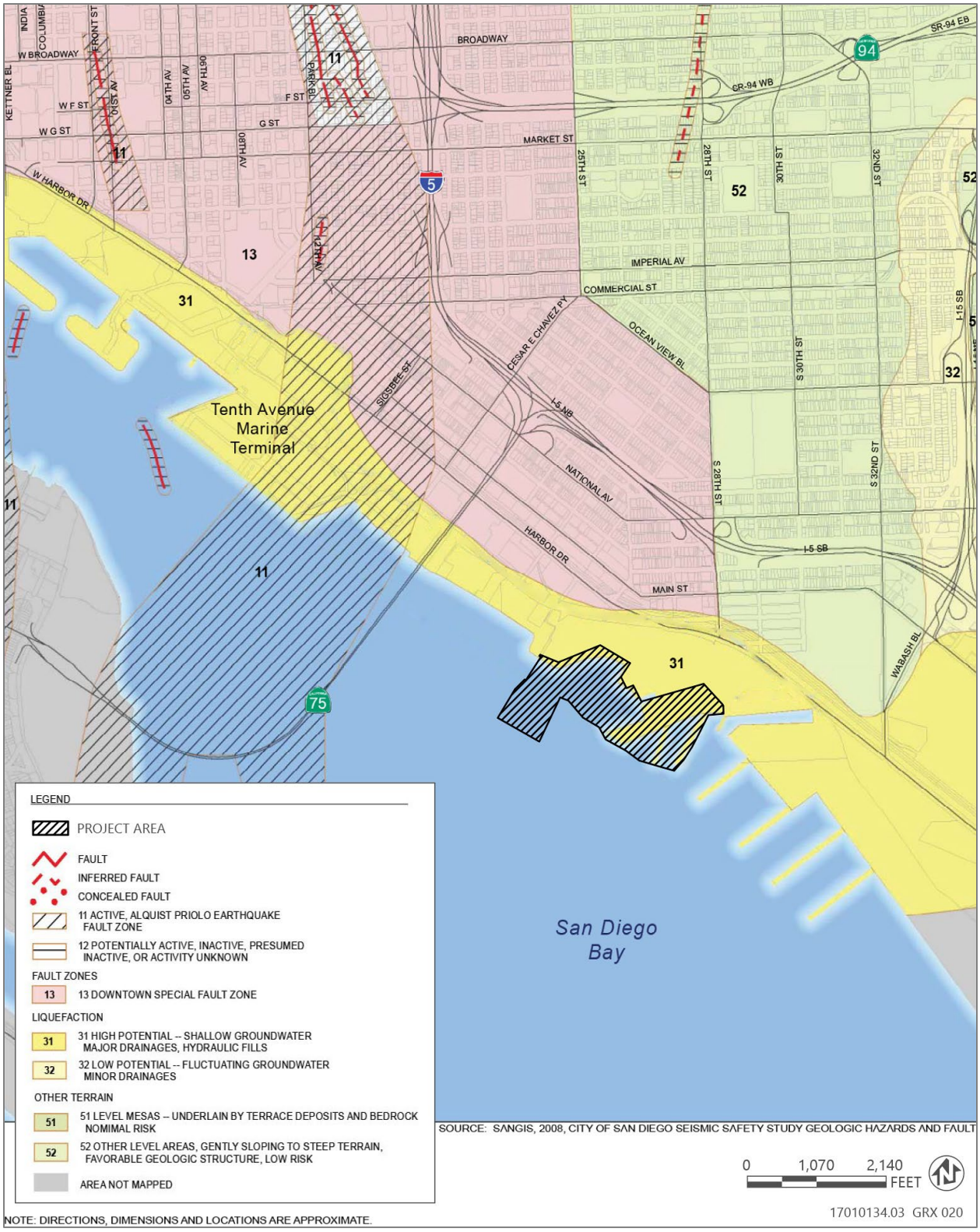
Subsidence

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 (San Diego County OES 2017, USGS n.d.).

Liquefaction

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.



Source:

Figure 3.4-2. Geologic Hazards in the Project Area

According to the City of San Diego Seismic Safety Study, the project site is in an area with high potential for liquefaction due to shallow groundwater, major drainages, and hydraulic fills (City of San Diego 2008: Grid Tile 13). Based on the *Geotechnical Investigation*, the project site is underlain with artificial fill and Holocene-age sediments, which overlie bay deposits, Quaternary-aged terrace deposits, and the San Diego Formation. Some of the soil within the bay deposits are comprised of soils that are potentially liquefiable. However, the soils comprising the Quaternary-aged terrace deposits are not considered liquefiable.

Lateral Spreading and Seismic-Induced Slope Instability

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) 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.

Lateral spreading is likely to occur in the bay deposits and fill soils that surround the bay. In addition, slopes comprised of bay deposits and some fill soils comprised of loose sands and soft clays may be subject to seismic-induced slope instability.

Landslides

No features indicative of ancient natural landslides on or adjacent to the project site. Landslides are not anticipated to be a concern based on the relatively flat topography of the project site.

3.4.3 Applicable Laws, Regulations, Plans, and Policies

3.4.3.1 Federal

Occupational Safety and Health Act of 1970

The Occupational Safety and Health Act establishes the framework for safe and healthful working conditions for workers 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.

3.4.3.2 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.[1] The act's primary purpose is to prohibit the construction of structures intended for human occupancy across the traces of active faults and the act 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.

[1] The act was originally titled the Alquist-Priolo Geologic Hazards Zone Act.

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 Conference of Building Officials in 1927 and has been updated approximately every 3 years since that time. The current version of the CBC (2022) became effective on January 1, 2023. 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 (e.g., flood, wind) 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. Building development is 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, building 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.

3.4.4 Project Impact Analysis

3.4.4.1 Methodology

The following impact analysis evaluates the potential effects on geology and soils that could occur from the project. The methodology considers the existing geologic and soil conditions established in Section 3.4.2, *Existing Conditions*, and the applicable laws and regulations pertaining to geologic hazards and soils described in Section 3.4.3, *Laws, Regulations*, *Plans, and Policies,* in order to determine the project's potential to directly or indirectly cause substantial adverse effects related to a hazardous geologic condition or event. Information in this analysis in based in part on the *Geotechnical Investigation* (Appendix I).

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. The exception, however, would be a project that would develop in an area with a known hazardous environmental condition and, by modifying the existing 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 project implementation.

3.4.4.2 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 geology and soils impacts from implementation of the project.

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. Result in substantial soil erosion or the loss of topsoil.
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.
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property.
5. Have soils 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 Environmental Initial Study Checklist (Appendix C), thresholds 1 (i), (ii), and (iv); 2; 4; 5; and 6 are not included in the analysis below, as the project would not result in significant impacts related to adverse effects from earthquake fault rupture, seismic ground shaking, or landslides; substantial soil erosion or loss of topsoil; expansive soils; soils incapable of supporting wastewater disposal systems; and destruction of unique paleontological resources or geologic features. These conclusions are summarized in Section 5.3, *Effects Not Found to Be Significant*, of this Draft EIR. Therefore, only thresholds 1 (iii) and 3 are discussed in the impact analysis below.

3.4.4.3 Project Impacts and Mitigation Measures

Threshold 1(iii): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Impact Discussion

According to the City of San Diego Seismic Safety Study, the project site is in an area with high potential for liquefaction due to shallow groundwater, major drainages, and hydraulic fills (City of San Diego 2008: Grid Tile 13). In addition, the *Geotechnical Investigation* notes that some of the soil within the bay deposits are comprised of soils that are potentially liquefiable.

No project components would require grading on the landside portion of the project site and, therefore, there would be no impact associated with the potential of seismic-related ground failure on the landside portion of the project site. Moreover, the in-water project components would not have the potential to exacerbate the existing risk of seismic-related ground failure, including liquefaction, because the in-water structures would be engineered in consideration of the existing sediment and soil conditions. Specifically, the project would be designed and constructed in accordance with the recommendations in the *Geotechnical Investigation* (TerraCosta Consulting Group 2020) that address risks related to seismic-related ground failure. The *Geotechnical Investigation* provides recommendations for pile installation methods; slope inclination; pile capacity, including lateral load capacities for vertical piles; and sheet-pile bulkhead lateral pressures, which would provide structure stability and security and would not worsen the existing conditions (refer to Appendix I for additional information). The District will require implementation of the recommendations of the *Geotechnical Investigation* as a condition of approval of the CDP for the project.

As discussed in Section 3.4.1, *Overview*, the *Geotechnical Investigation* (TerraCosta Consulting Group 2020) evaluated 950 linear feet of shoreline repairs between Berths 2 and 6. Geologic conditions for the as-needed 1,500 linear feet of shoreline repairs (from Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall) were not specifically evaluated. However, the *Geotechnical Investigation* evaluated shoreline repairs between Berths 2 and 6 and similar conditions are anticipated along the quay walls throughout the entire NASSCO leasehold.

Although similar conditions are anticipated along the quay walls throughout the entire NASSCO leasehold, the *Geotechnical Investigation* does not provide site-specific design and construction recommendations for the 1,500 linear feet of shoreline repairs (from Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall) because geologic conditions were not specifically evaluated in that area. Without proper geotechnical engineering, the proposed structures may not be designed and installed to withstand and avoid causing or exacerbating geologic hazards. Therefore, this impact would be potentially significant (**Impact-GEO-1**).

Impact Determination and Mitigation

Implementation of the proposed project would have the potential to directly or indirectly cause a substantial adverse effect, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. Potentially significant impact(s) include:

Significant Impacts

Impact-GEO-1: Potential for Project Structures to Cause or Exacerbate Geologic Hazards from Seismic-Related Ground Failure, including Liquefaction. Site-specific design and construction recommendations were not provided for the 1,500 linear feet of shoreline repairs (from Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall) because geologic conditions were not specifically evaluated in that area. Without proper geotechnical engineering, the proposed structures may not be designed and installed to withstand and avoid causing or exacerbating geologic hazards and the as-needed shoreline repairs would have potential to result in a significant impact.

Mitigation Measures

For **Impact-GEO-1**

MM-GEO-1: Require a Final Geotechnical Investigation Prior to Commencing As-Needed Shoreline Repairs. Prior to the issuance of a CDP for the project, the project applicant shall prepare and submit to the District a final geotechnical investigation of any shoreline repairs from Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall. The applicant shall incorporate all recommendations from the supplemental geotechnical investigation into the project design to ensure that all structures are engineered to specifications based on site-specific geotechnical conditions. and implementation of the recommendations shall be required as a condition of approval of the CDP.

Level of Significance After Mitigation

With implementation of **MM-GEO-1**, geologic hazards from seismic-related ground failure (**Impact-GEO-1**) would be reduced to a less-than-significant level because all structures would be engineered to specifications based on site-specific geotechnical conditions.

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 Discussion

Landslide

According to the City of San Diego Seismic Safety Study, the project site is not within a landslide hazard area (City of San Diego 2008: Grid Tile 13). In addition, the *Geotechnical Investigation* did not identify any features indicative of ancient natural landslides on or adjacent to the project site. The landside portions of the NASSCO shipyard are completely developed and generally flat. There are no

steep slopes within or adjacent to the project site. Project construction would occur over or within water and there are no project components that would have the potential to exacerbate existing the risk of landslides. Therefore, project implementation would not cause potential substantial adverse effects from landslides and no impact would occur.

Lateral Spreading and Seismic-Induced Slope Instability

According to the *Geotechnical Investigation*, lateral spreading and seismic-induced slope instability could occur in the bay deposits and fill soils within the project site. As discussed above, the project components would not occur on the landside portion of the project site. In addition, the project would be designed and constructed in accordance with the recommendations in the *Geotechnical Investigation* that address soil instability. The *Geotechnical Investigation* provides recommendations for pile installation methods; slope inclination; pile capacity, including lateral load capacities for vertical piles; and sheet-pile bulkhead lateral pressures, which would provide structure stability and security and would not worsen the existing conditions (refer to Appendix I for additional information). As discussed under Threshold 1 above, the geologic conditions for a 1,500-foot portion of the quay wall revetment repairs and improvements were not specifically evaluated. However, the *Geotechnical Investigation* did evaluate certain specific areas and conditions are assumed to be the same within the project site. Regardless, without proper geotechnical engineering, the proposed repairs and improvements of the 1,500-foot portion of the quay wall revetment may not be designed and installed to withstand and avoid causing or exacerbating geologic hazards. Therefore, this impact would be potentially significant (**Impact GEO-2**).

Subsidence and Collapse

As described in Section 3.4.2.2, *Geologic Hazards*, 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 (San Diego County OES 2017, USGS n.d.). In addition, the project would not require dewatering or other fluid extraction from underlying geologic formations that would have potential to induce subsidence or collapse. Therefore, project implementation would not cause potential substantial adverse effects from subsidence or collapse and no impact would occur.

Liquefaction

As discussed under *Threshold 1* above, liquefaction has a high potential to occur in the project site. The project would be designed and constructed in accordance with the recommendations in the *Geotechnical Investigation* that address liquefaction. However, site-specific design and construction recommendations were not provided for the 1,500 linear feet of shoreline repairs (from Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall) because geologic conditions were not specifically evaluated in that area. Without proper geotechnical engineering, the proposed structures may not be designed and installed to withstand and avoid causing or exacerbating geologic hazards. Therefore, this impact would be potentially significant (**Impact GEO-2**).

Impact Determination and Mitigation

Implementation of the proposed project would potentially 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. Potentially significant impact(s) include:

Significant Impacts

Impact-GEO-2: Potential for project structures to be located on unstable geologic units or soils and result in landslide, lateral spreading, subsidence, liquefaction, or collapse. Site-specific design and construction recommendations were not provided for the 1,500 linear feet of shoreline repairs (from Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall) because geologic conditions were not specifically evaluated in that area. Without proper geotechnical engineering, the proposed structures may not be designed and installed to withstand and avoid causing or exacerbating geologic hazards from geologic unit or soil instability and the as-needed shoreline repairs would have potential to result in a significant impact.

Mitigation Measures

For **Impact-GEO-2**

- Implement **MM-GEO-1**, as discussed under *Threshold 1* above

Level of Significance After Mitigation

With implementation of **MM-GEO-1**, geologic hazards from geologic unit or soil instability (**Impact-GEO-2**) would be reduced to a less-than-significant level because all structures would be engineered to specifications based on site-specific geotechnical conditions.

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Section 3.5
Hazards and Hazardous Materials

3.5.1 Overview

This section describes the existing conditions within the project area and applicable laws, regulations, plans, and policies for hazards and hazardous materials. This section also provides an analysis of the proposed project's potential to (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, and (3) be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The analysis and conclusions regarding air pollutants and their associated health risk are discussed in Section 3.1, *Air Quality and Health Risk*, and water pollutants are discussed in Section 3.6, *Hydrology and Water Quality*, and not in this section. All other potential hazards and hazardous materials issues were analyzed in Section VIII of the Initial Study Environmental Checklist (see Appendix C) and determined to have no impact or less-than-significant impacts. The analysis and conclusions regarding these issues are summarized in Chapter 5, Section 5.3, *Effects Not Found to Be Significant*.

As discussed in Section 3.5.4.3, prior to mitigation, the proposed project would have the potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment. Mitigation measures are required to reduce all potential hazardous materials impacts to less-than-significant levels.

3.5.2 Existing Conditions

The following section presents the historical and current activities at the project site, and the known extent of onsite contamination both as determined through past investigations and through a review of available records.

3.5.2.1 Historical Activities

The project site is within the NASSCO leasehold, which consists of a full-service ship construction, modification, repair, and maintenance facility that spans 126 acres of tidelands property on the San Diego Bay waterfront. NASSCO has conducted shipyard operations at this site since 1960. NASSCO's shipyard facilities have included concrete platens used for steel fabrication, a graving dock, shipbuilding ways, and berths on piers or land to accommodate the berthing of ships.

3.5.2.2 Surrounding Land Uses and Activities

BAE Systems operates a shipyard facility located immediately northwest of the project site, which is used to modernize, repair, and overhaul marine vessels. The BAE Systems shipyard facility includes administrative offices, production shops, training areas, parking and staging areas, floating drydocks, concrete platforms, piers, marine railways, and related utilities and infrastructure. Hazardous materials are stored and used within the BAE Systems leasehold as part of their

operations. The BAE Systems facilities also generate hazardous waste classified as ignitable waste, methyl ethyl ketone, and spent nonhalogenated solvents.

Industrial land uses north of the project site across Harbor Drive and the railroad ROW include a metal fabrication shop; gas station; recycling services centers; meat wholesaler; paint stores; and automobile service, repair, and storage facilities. Naval Base San Diego, which conducts waterfront operations and fleet support of the U.S. Navy, is located immediately east and southeast of the project site. Chollas Creek is located just south of the project site.

3.5.2.3 Existing Onsite Storage and Use of Hazardous Materials

As established by Resource Conservation and Recovery Act (RCRA), the U.S. EPA administers a program to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. The project site is classified under the RCRA as a Large Quantity Generator (LQG), which is a facility that generates, transports, stores, treats, and/or disposes of hazardous waste, as defined by RCRA, in amounts over 1,000 kilograms (kg) for hazardous waste or 1 kg for acutely hazardous waste per month.

Existing operations with the NASSCO shipyard involve the routine use and storage of hazardous materials and generation of hazardous waste. Waste generated at the facility includes spent abrasive, paint, rust, petroleum products; marine growth; sanitary waste; and general refuse. According to the Department of Toxic Substances Control (DTSC) Hazardous Waste Tracking System, NASSCO generated approximately 106.5 tons of waste subject to RCRA regulations in 2020, including ignitable waste, corrosives, and non-halogenated solvents (DTSC 2021a).

3.5.2.4 Hazardous Materials Database Results

Project Site

The State Water Resources Control Board (SWRCB) GeoTracker database contains records for sites that require cleanup, including leaking underground storage tank (LUST) sites, cleanup program sites, military cleanup sites, and other sites with potential for soil and groundwater contamination. The GeoTracker database identifies six cleanup program sites associated with the NASSCO leasehold. The cleanup for five of these sites has been completed and the cases for these five sites have been closed with dates ranging from 1986 to 2018 (SWRCB 2021).

The San Diego Bay Shipyard Sediment Cleanup site (Shipyard Sediment Site; Case No. T10000003580) is the remaining active site within the project boundary. Figure 3.5-1 shows the Shipyard Sediment Site location relative to the project site. More information about the Shipyard Sediment Site, including a summary of recent investigation results, is provided below under the heading, *San Diego Bay Shipyard Sediment Cleanup Site*.

DTSC EnviroStor database tracks cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The EnviroStor database identifies one hazardous waste site associated with the NASSCO shipyard. In 1999, NASSCO signed a Consent Agreement for Corrective Action with DTSC for hazardous waste identified in the vicinity of the NASSCO Building 6 Sump. As of 2016, approximately 20 tons of mixed asphalt and concrete and 66.8 tons of soil contaminated with metals, volatile organic compounds, semivolatile organic compounds, and petroleum hydrocarbons

were removed from the site. DTSC concurred that the site cleanup goals were met and the site is undergoing monitoring (DTSC 2021b).

Offsite

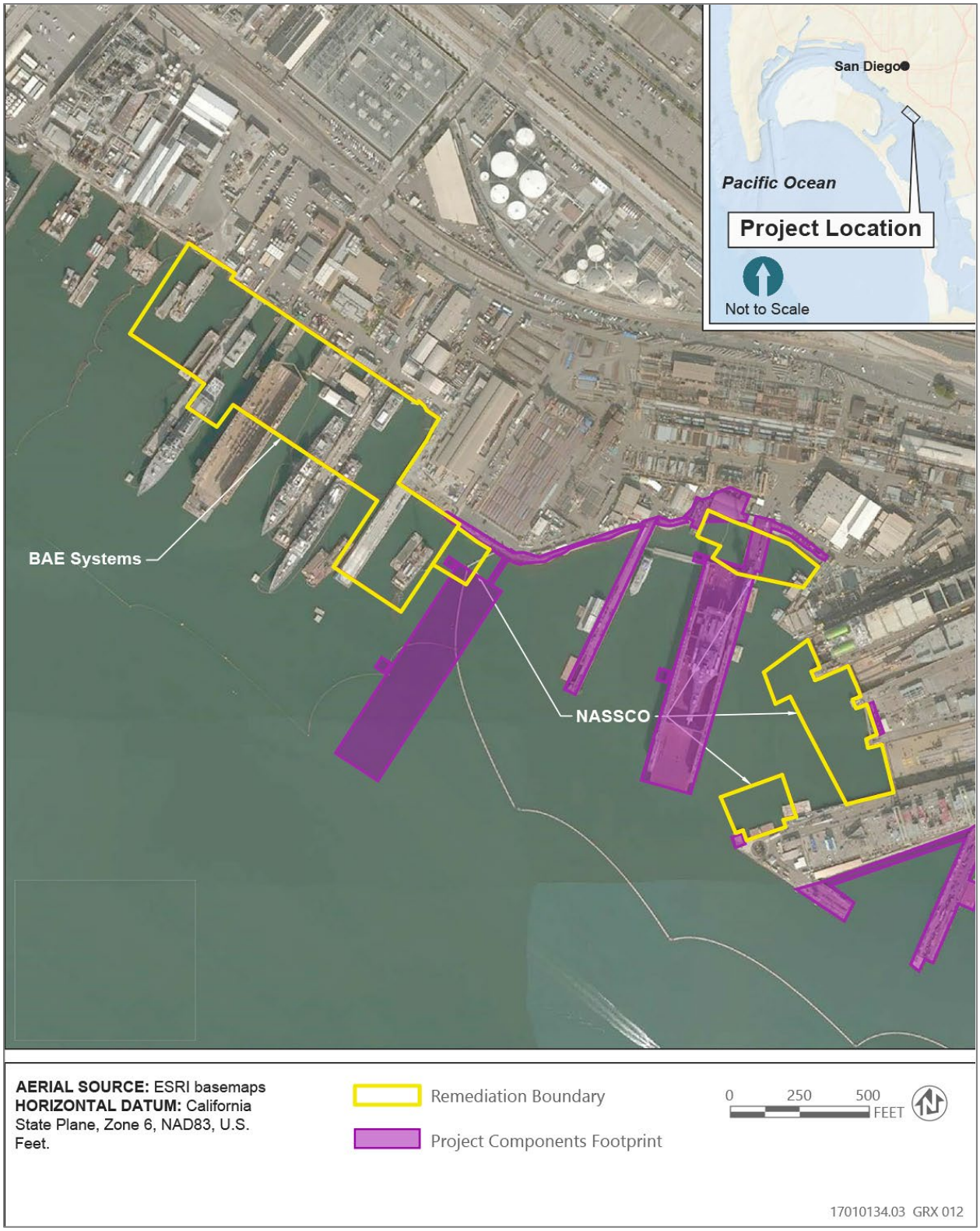
Within a 0.5-mile radius of the project site, there are several LUST cleanup sites, cleanup program sites, and DTSC cleanup sites associated with nearby industrial properties. The open sites and sites needing evaluation are listed in Table 3.5-1 below.

Table 3.5-1 Hazardous Waste Sites within a 0.5-Mile Radius of the Project Site (Open or Needing Evaluation)

Site Name/Case #	Address	Site Type	Status	Potential Contaminants of Concern	Potential Media of Concern
Carlson & Beauloye	2141 Newton Ave, San Diego, CA 92113	Cleanup Program Site	Open – Site Assessment as of 8/1/2018	None Specified	None Specified
Chevron Harbor Terminal – Lower Tank Farm	2295 Belt St, San Diego, CA 92113	DTSC Cleanup Site - Evaluation	Refer: 1248 Local Agency as of 9/13/2001	None Specified	None Specified
Chevron USA Inc./T0608117151	2351 Harbor Dr, San Diego, CA 92113	Cleanup Program Site	Open – Site Assessment as of 6/16/1993	Gasoline	Other Groundwater (uses other than drinking water)
Chevron USA Inc./T0607300019	2351 Harbor Dr, San Diego, CA 92113	LUST Cleanup Site	Open – Eligible for Closure as of 6/22/2023	Diesel, Gasoline	Other Groundwater (uses other than drinking water)
CP Kelco	2025 E. Harbor Dr, San Diego, CA 92113	DTSC Cleanup Site - Evaluation	Refer: 1248 Local Agency as of 4/12/2021	None Specified	None Specified
Kelco	2145 E. Belt St, San Diego, CA 92113	DTSC Cleanup Site - Evaluation	Refer: 1248 Local Agency as of 1/23/2001	None Specified	None Specified
NutraSweet Kelco Co.	2145 E. Belt St, San Diego, CA 92113	DTSC Cleanup Site – Tiered Permit	Inactive – Needs Evaluation	None Specified	None Specified

Site Name/Case #	Address	Site Type	Status	Potential Contaminants of Concern	Potential Media of Concern
OFL 2292 LLC	2292 National Ave, San Diego, CA 92113	Cleanup Program Site	Open – Site Assessment as of 4/26/2019	None Specified	None Specified
Pacific Treatment Corp.	2146 Main St, San Diego, CA 92113	DTSC Cleanup Site - Corrective Action	Inactive – Needs Evaluation	None Specified	None Specified
Sampson Street Site	Sampson Street	Cleanup Program Site	Open – Inactive as of 1/14/2019	Tetrachloroethylene (PCE), Trichloroethylene (TCE)	Indoor Air, Soil Vapor
SDG&E and BAE Systems Northern Sediment Delineation Investigation	2145 East Belt St, San Diego, CA 92113	Cleanup Program Site	Open – Site Assessment	Other Metal, Polychlorinated Biphenyls (PCB)	Sediments, Soil, Surface Water, Under Investigation
SDG&E Environmental Department/SLT19730585	1348 Sampson St, San Diego, CA 92113	Cleanup Program Site	Open – Site Assessment as of 11/30/2006	None Specified	None Specified
SDG&E Silvergate Substation	1348 Sampson St, San Diego, CA 92113	LUST Cleanup Site	Open – Assessment & Interim Remedial Action as of 11/5/2018	Gasoline, Other Solvent or Non-Petroleum Hydrocarbon	Soil, Surface Water
Arc Castle Engineering	3106 Main St, San Diego, CA 92113	DTSC Cleanup Site - Evaluation	Refer: 1248 Local Agency as of 4/22/2004	None Specified	None Specified

Source: DTSC 2023



Source: Adapted from Anchor QEA 2014

Figure 3.5-1 Shipyard Sediment Site Remediation Boundaries Relative to the Project Site

San Diego Bay Shipyard Sediment Cleanup Site (CAO R9-2012-0024)

In 2012, the San Diego RWQCB issued Cleanup and Abatement Order (CAO) R9-2012-0024 (RWQCB 2012) for sediment contamination within the waterside portions of the NASSCO and BAE Systems leaseholds. The remediation boundary of the CAO is collectively referred to as the San Diego Bay Shipyard Sediment Cleanup Site (Shipyard Sediment Site) and its boundaries are depicted on Figure 3.5-1.

The shipyard sediment site was divided into the North Site (the property leased by BAE Systems) and the South Site (the property leased by NASSCO). The CAO established cleanup levels for primary and secondary contaminants of concern (COC). Primary COCs include copper, mercury, tributyltin (TBT), polychlorinated biphenyls (PCBs), and high molecular weight polynuclear aromatic hydrocarbons (HPAHs). Secondary COCs include arsenic, cadmium, lead, and zinc.[1] The specific cleanup objectives from the 2012 CAO (No. R9-2012-0024) are included in Table 3.5-2 and are also summarized in Table 1 of the June 2014 *Final Cleanup and Abatement Completion Report San Diego Shipyard Sediment Site – South Shipyard* (Anchor QEA 2014).

Table 3.5-2. Cleanup Objectives Listed in the CAO

Chemical	Units (dry weight)	Targeted Post-Remedial Dredge Area Concentrations	Estimated Post-Remedial Surface-Area Weighted Average Concentrations (SWAC)	Post-Remedial Trigger Concentrations
Copper	mg/kg	121	159	185
Mercury	mg/kg	0.57	0.68	0.78
HPAH[1]	µg/kg	663	2,451	3,208
Total PCB Congeners[2]	µg/kg	84	194	253
TBT (Tributylin)	µg/kg	22	110	156

Source: CAO R9-2012-0024 (RWQCB, March 2012)

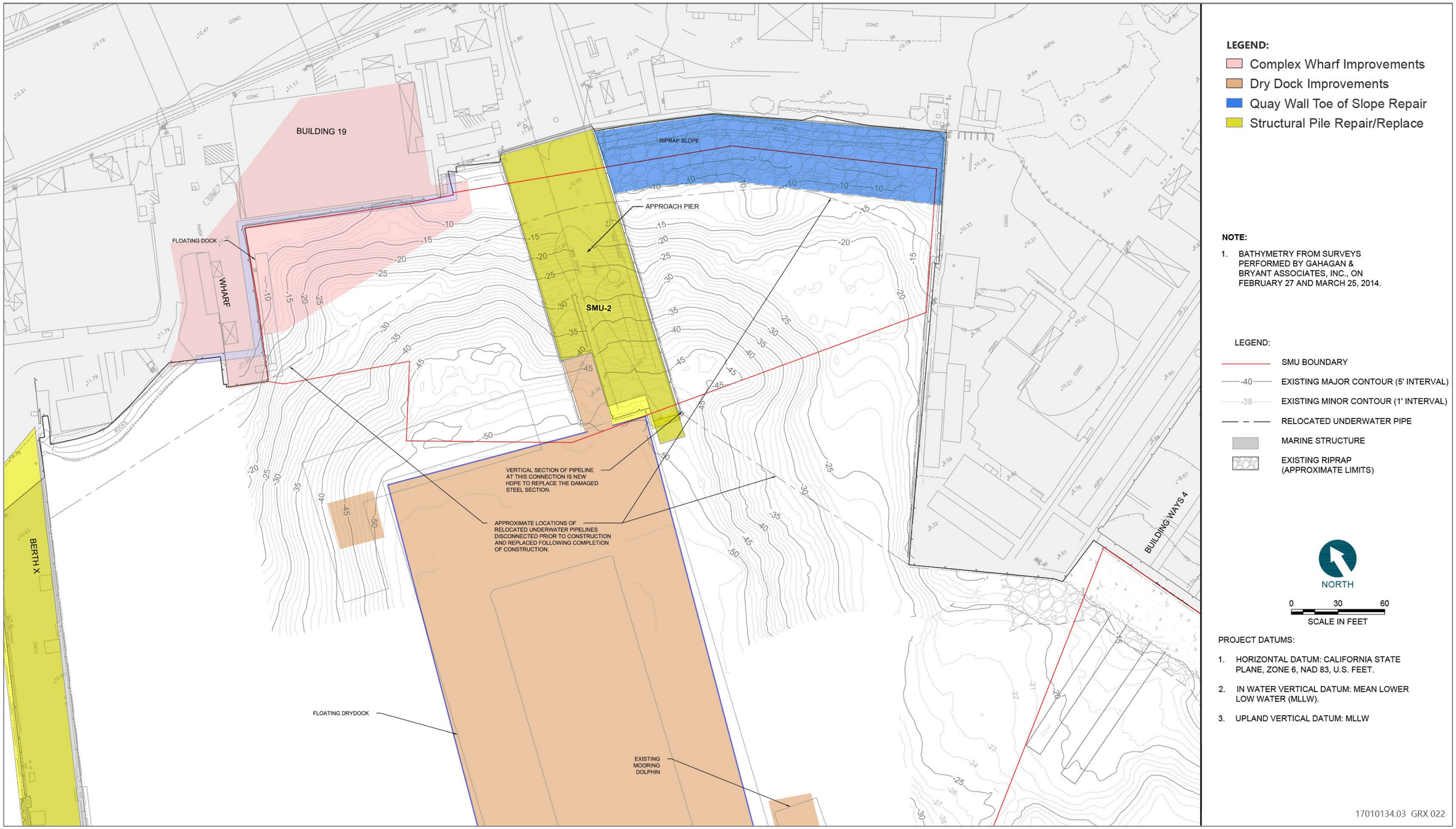
Notes: µg/kg = microgram per kilogram; mg/kg = milligram per kilogram

1 HPAHs = sum of six PAHs: Fluoranthene, Perylene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenzo(a,h)anthracene.

2 Total PCBs Congeners = sum of 41 congeners: 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206

The project site lies within the South Site boundary and the extent of the areas that required remediation pursuant to the CAO are shown by the yellow boundary lines depicted in Figure 3.5-1. Areas outside of these boundary areas were not part of the remedial footprint proposed in the CAO. Figure 3.5-2 shows the Approach Pier where remedial dredging did not occur due to existing structure interference.

[1] Secondary contaminants of concern (secondary COCs) are contaminants with lower concentrations relative to background, and are highly correlated with primary COCs and would be addressed in a common remedial Footprint (RWCQB 2012).



Source: Anchor QEA 2014

Figure 3.5-2 Location of Approach Pier – Inaccessible to Dredging and Received Sand and Gravelly Sand Cover

Remedial activities under the CAO for the South Site were initiated in September 2013 and completed in March 2014. The Final Cleanup and Abatement Completion Report San Diego Shipyard Sediment Site – South Shipyard (Anchor QEA 2014) indicated that approximately 28,660 cubic yards (cy) of contaminated sediments were dredged from the South Shipyard sediment site. Impacted sediment that could not be removed due to risk of undermining slopes or existing pier structures was covered with a sand or gravelly sand cover. In total, approximately 19,760 tons of sand material was placed as cover in four distinct areas in the South Shipyard:

- Beneath the Approach Pier in SMU-2 and immediately adjacent areas;
- On top of the marine extensions from the Building Ways 4 and adjacent areas in SMU-3;
- On top of the marine extensions from the Building Ways 3 and adjacent areas in SMU-3; and
- In the continuous open-water area spanning SMU-3C, -3D, -3G, and -3F including the riprap protection adjacent to the concrete slabs within the remedial footprint.

The location of the Approach Pier in SMU-2 is shown in Figure 3.5-2.[2] This area could not be dredged due to the existing Approach Pier structure; therefore, sand cover was placed over approximately 10,440 square feet (Anchor QEA 2014, Table 8). Additionally, approximately 67,375 square feet of additional sand and gravelly sand cover was placed in open-water areas in SMU-3 where it was necessary to maintain the stability of existing slopes, structures, and bulkheads (see Figure 3.5-3).

Two types of sand cover material were specified: sand material and gravelly sand material. The sand material (containing particles smaller than 0.375 inch in size) was used over relatively flat areas of dredge prisms, including the under pier portion of SMU-2 and around the marine extensions in front of Building Ways 3 and 4. The gravelly sand cover (containing 25 to 50 percent larger than 0.75 inch in size) was used over sloping areas due to its higher internal friction angle and greater ability to remain positioned over sloping ground surfaces (Anchor QEA 2014).

In addition, as shown in Figure 4 of the Remedial Action Plan San Diego Shipyard Sediment Site, the area under the Repair Complex Wharf was also inaccessible to dredging and sand cover (Anchor QEA 2012).

The CAO stipulated post-remedial monitoring at Year 2 (2018) and Year 5 (2021) after the completion of the remediation to confirm remedial goals continue to be achieved. The Work Plan for the San Diego Shipyards Post-Remedial Monitoring (Work Plan) required remedial performance monitoring (composite chemistry, discrete sample chemistry analysis for benthic exposure, sediment toxicity testing, and bioaccumulation testing) in Years 2 and 5 (and possibly Year 10, if deemed warranted), and benthic community recovery monitoring in Years 3 and 4. The Work Plan would verify that the remedial actions are effective in reducing and maintaining chemical concentrations in sediments to an acceptable level, as determined by the RWQCB.

As of January 2023, the most current post-remedial monitoring results are from the Year 5 Post-Remedial Monitoring Progress Report (Year 5 Progress Report), dated February 14, 2022 (Anchor QEA 2022a) and the subsequent Exceedance Investigation and Characterization Study Report (EICS Report; Anchor QEA 2022b). The Year 5 post-remedial monitoring indicated that remedial goals

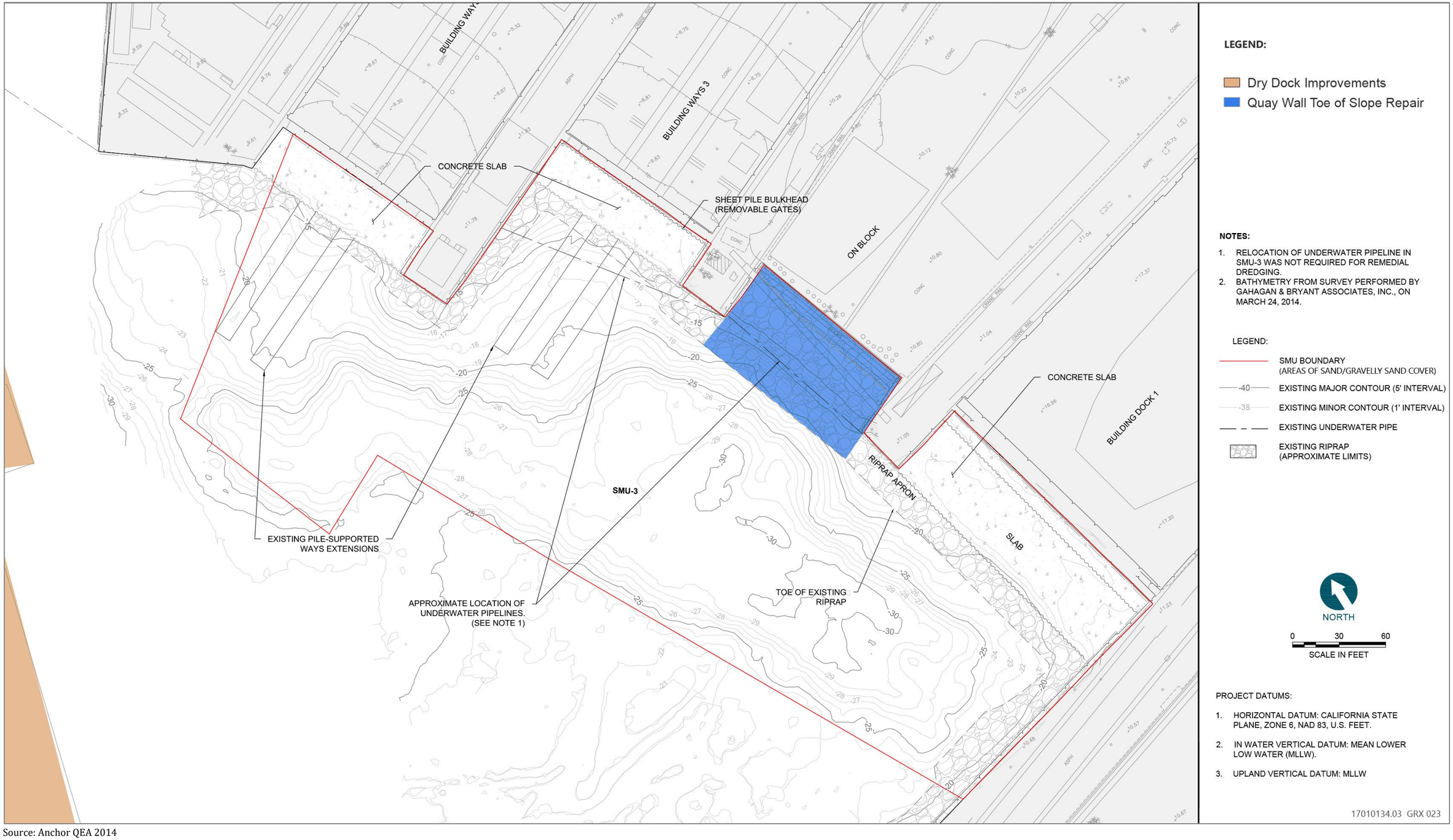
[2] Note that the timber pier in SMU-1, originally anticipated to be left in place and sand cover placed (e.g., Attachment 4 of the 2012 CAO), was demolished for remedial dredging access.

regarding sediment chemistry, toxicity, and bioaccumulation levels were achieved. Moreover, the composite site-wide surface-weighted average concentration (SWAC) trigger levels set by the CAO, were achieved for all primary COCs (copper, mercury, TBT, and HPAHs) in Year 5, except for PCBs (Anchor QEA 2022a and 2022b). However, concurrence with these findings by the RWQCB is still pending.

As documented in the Year 5 Progress Report, the potential adverse impacts of the sitewide SWAC exceedance are not evident given the ability to support a benthic community, lack of toxicity, and the continued significant decrease in bioaccumulation after the remedial action. (Anchor QEA2022a and 2022b).[3] These tentative findings are still subject to concurrence by the RWQCB.

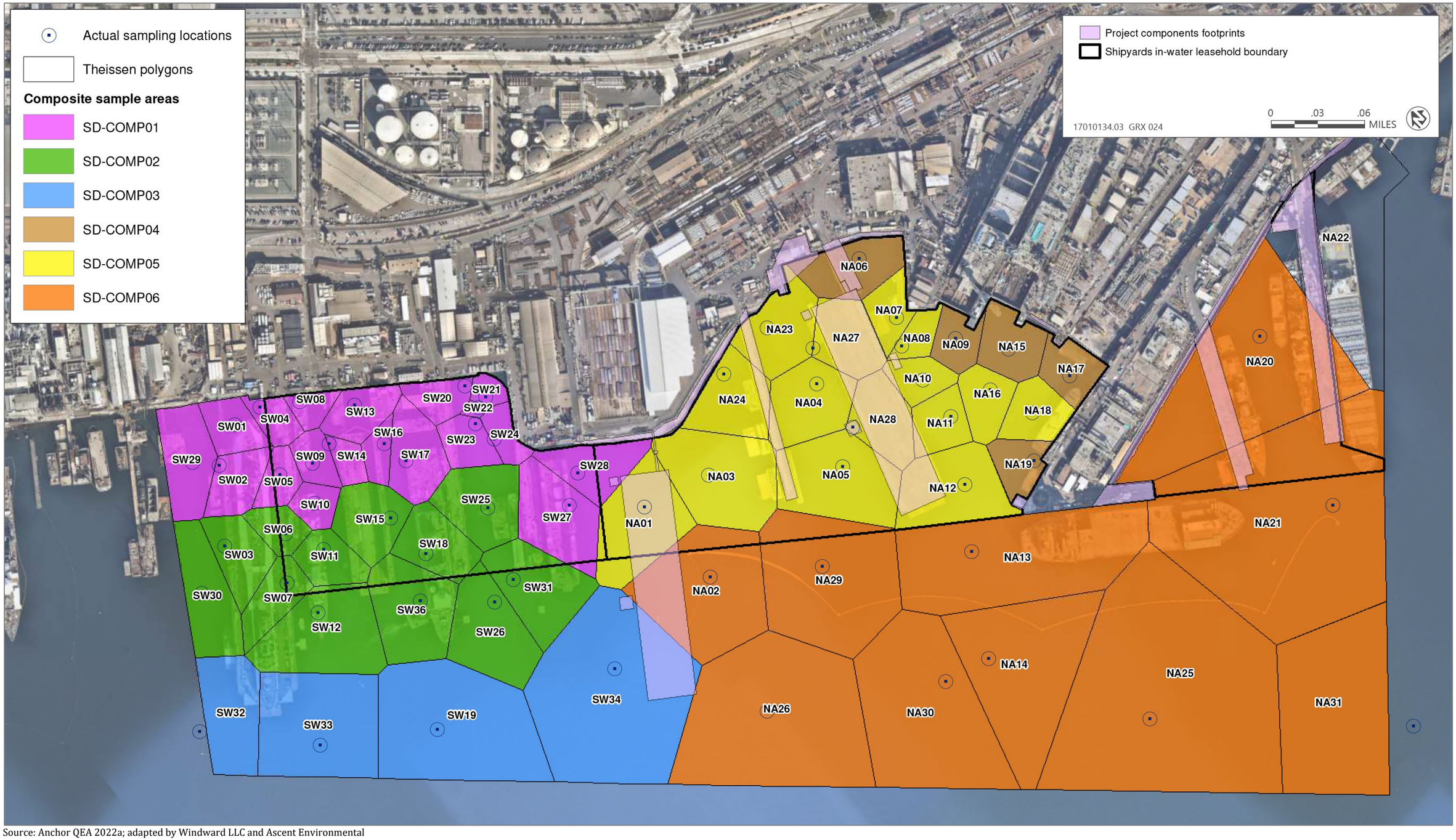
Figures 3.5-4 through 3.5-9 present a heat map of the results of the Year 5 monitoring. Table 3.5-3 lists the most recent background sediment chemistry levels as well as the CAO's post-remedial trigger concentrations. As shown in the figures and the table, the Shipyard Sediment Site is separated into six groups. The North Site is composed of the dredged areas within the BAE leasehold (Group 1; SD-COMP01), the non-dredged areas within the BAE Leasehold (Group 2 SD-COMP02), and areas outside of the BAE leasehold (Group 3; SD-COMP03). The South Site is composed of the dredged areas within the NASSCO leasehold (Group 4; SD-COMP04), the non-dredged areas within the NASSCO leasehold (Group 5; SD-COMP05), and the areas outside of the NASSCO leasehold (Group 6; SD-COMP06).

[3] PCBs (sum of 41 congeners per Table 3.5-2) were +31 micrograms per kilogram [µg/kg] above the composite site-wide SWAC goal.



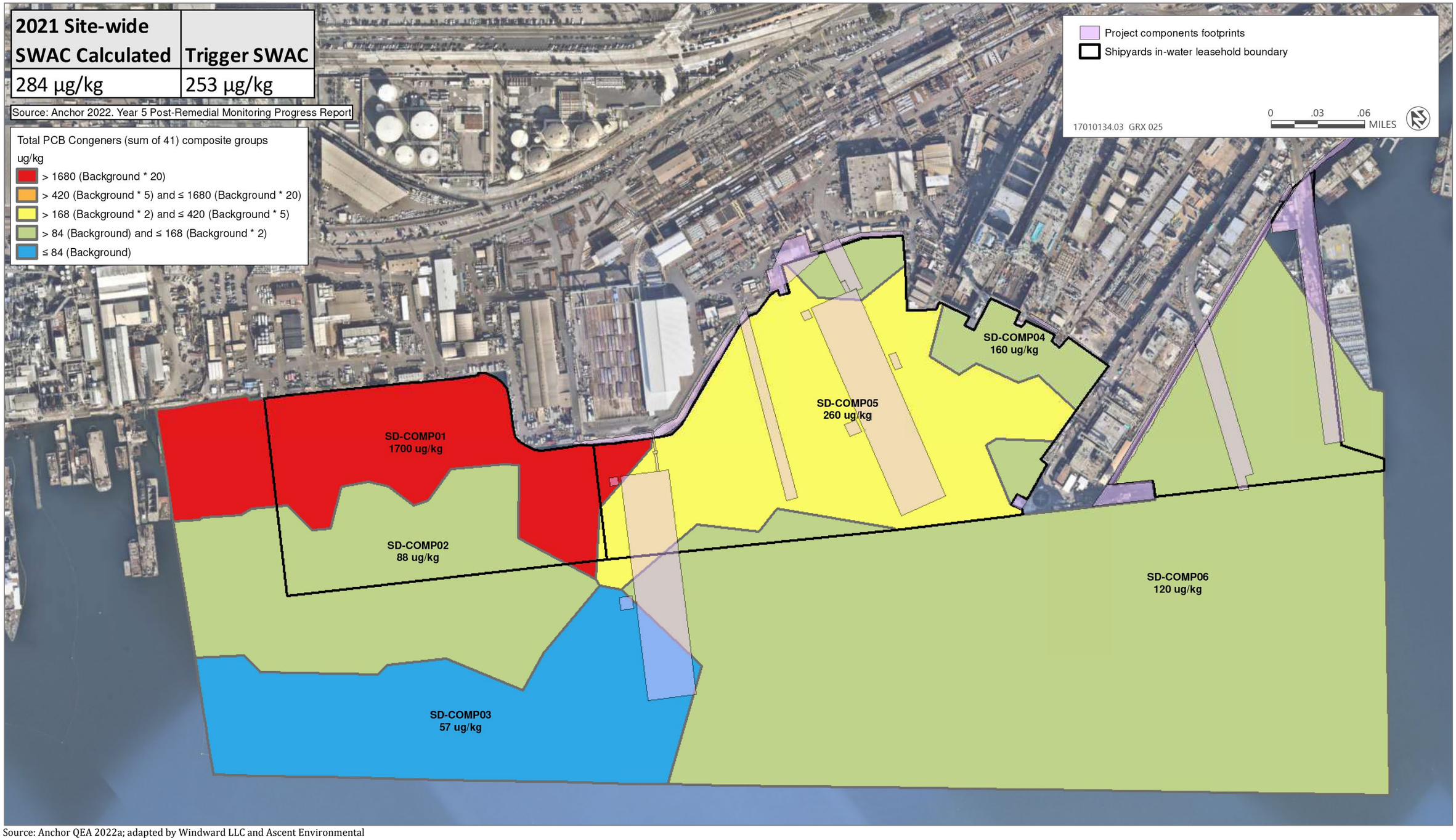
Source: Anchor QEA 2014

Figure 3.5-3 General Location of Remaining Sand and Gravelly Sand Cover On and Around Existing Structures and Slopes in SMU-3



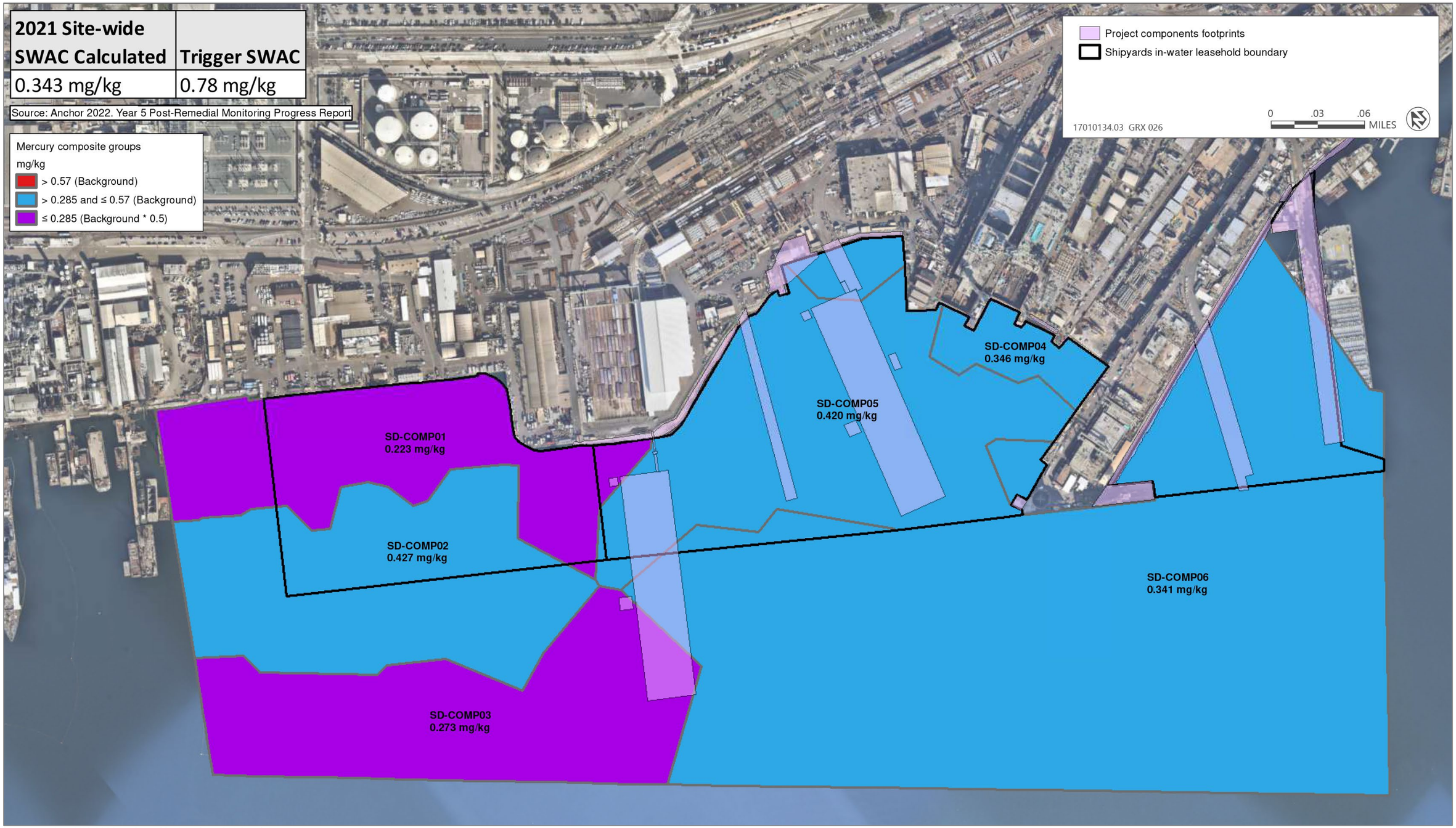
Source: Anchor QEA 2022a; adapted by Windward LLC and Ascent Environmental

Figure 3.5-4 Year 5 Post Remedial Sampling Locations and Composite Areas (2021)



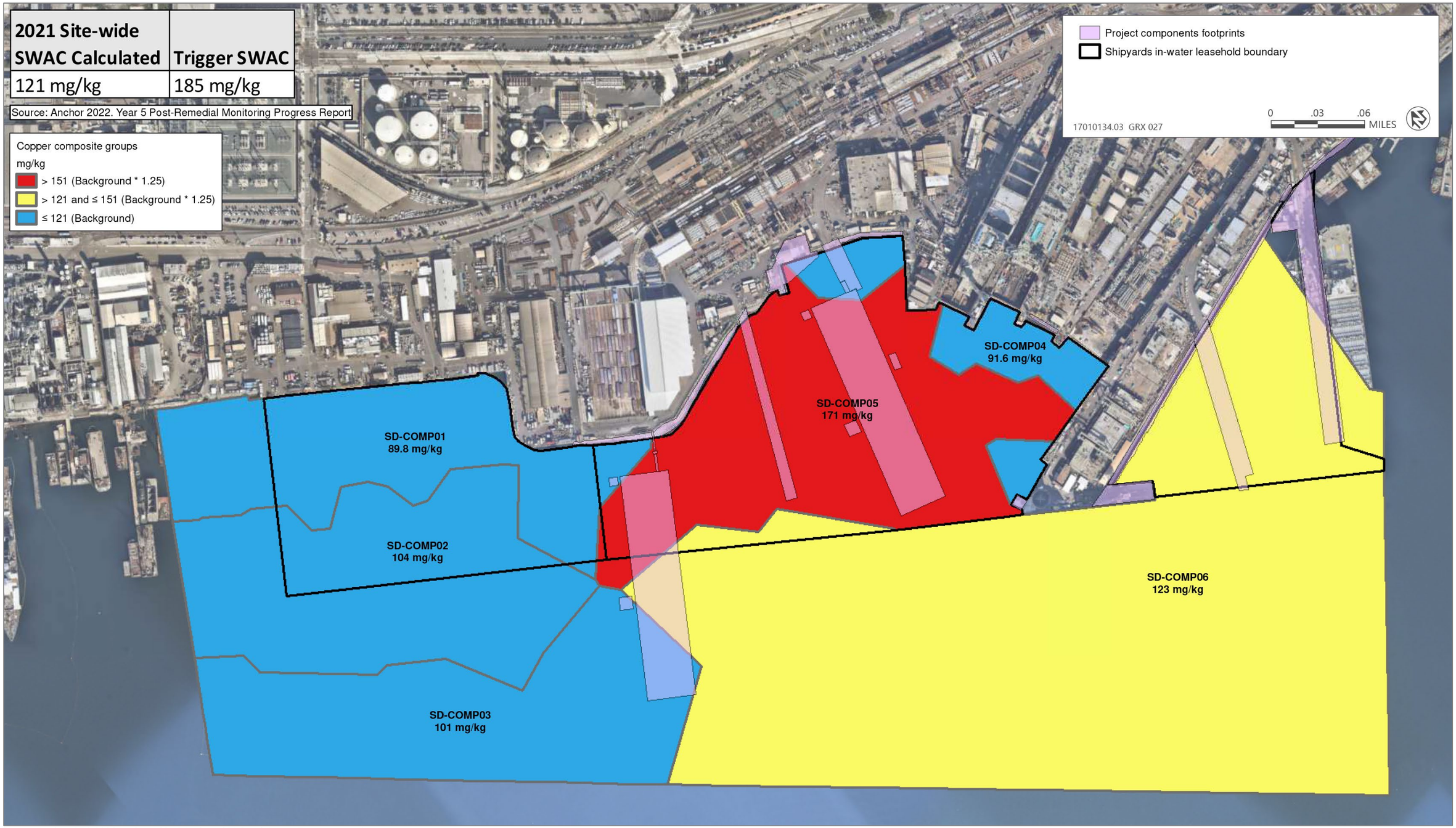
Source: Anchor QEA 2022a; adapted by Windward LLC and Ascent Environmental

Figure 3.5-5 Existing Total PCB Concentrations



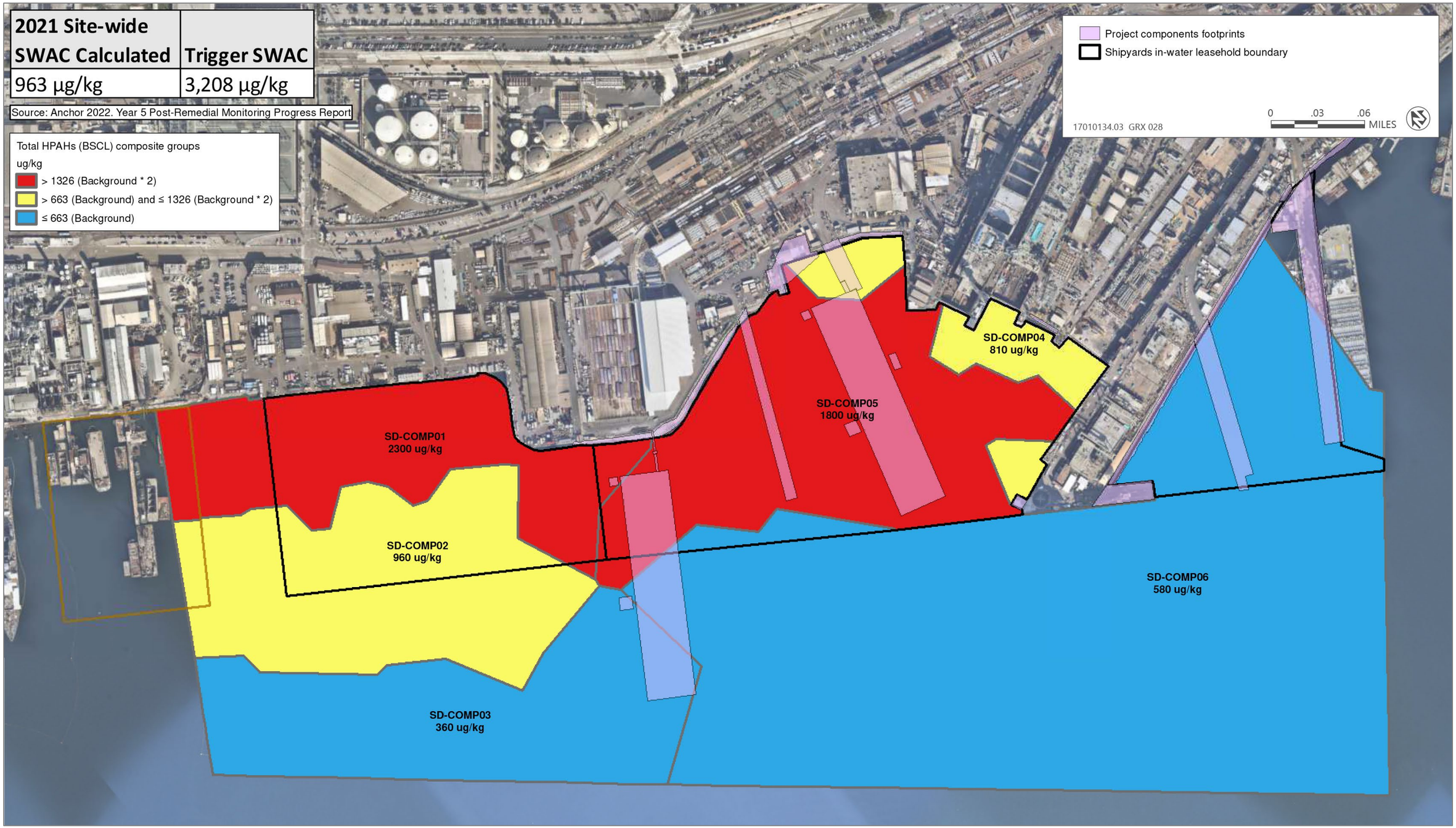
Source: Anchor QEA 2022a; adapted by Windward LLC and Ascent Environmental

Figure 3.5-6 Existing Mercury Concentrations



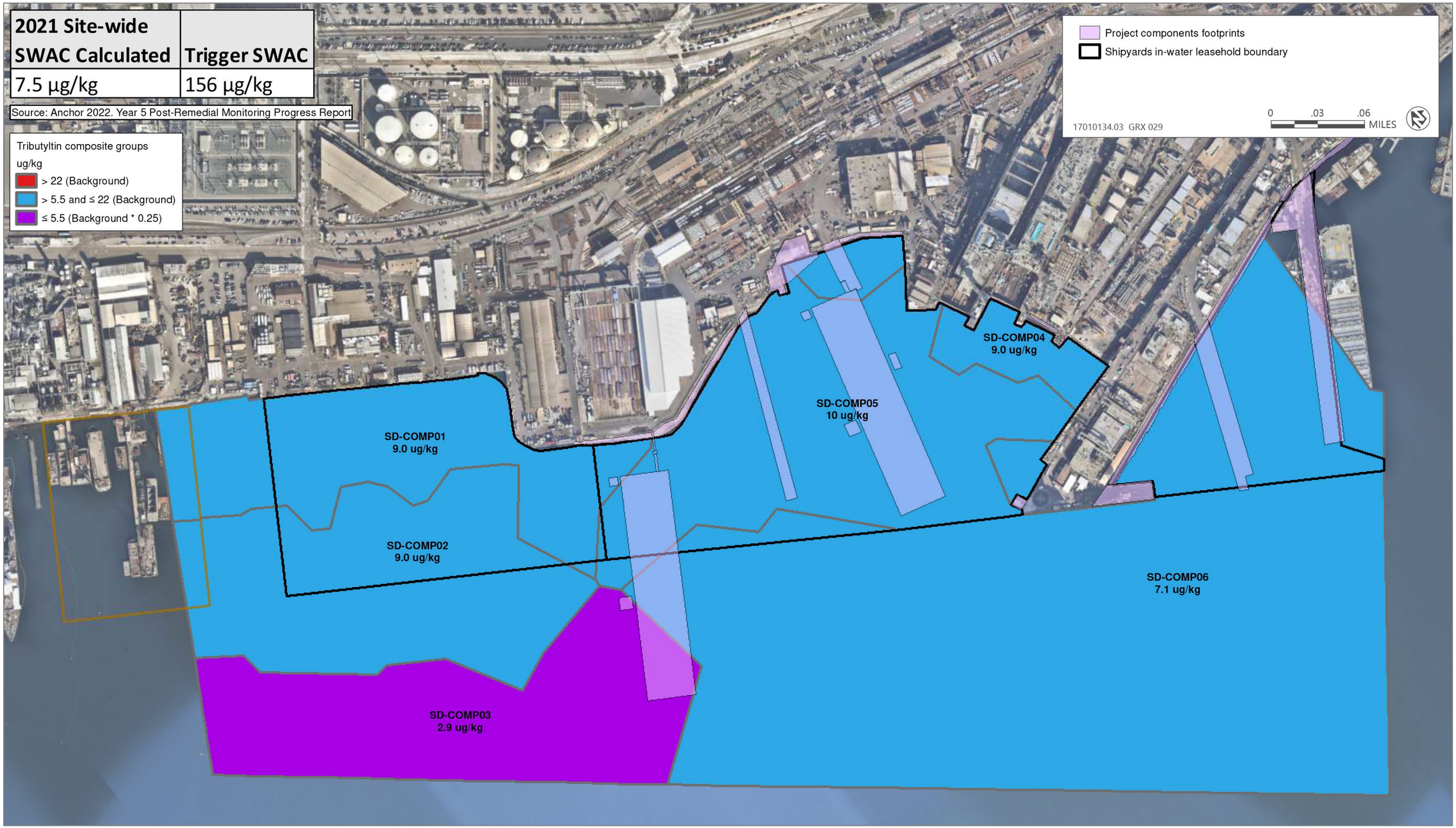
Source: Anchor QEA 2022a; adapted by Windward LLC and Ascent Environmental

Figure 3.5-7 Existing Copper Concentrations



Source: Anchor QEA 2022a; adapted by Windward LLC and Ascent Environmental

Figure 3.5-8 Existing Total HPAHs Concentrations



Source: Anchor QEA 2022a; adapted by Windward LLC and Ascent Environmental

Figure 3.5-9 Existing Tributyltin (TBT) Concentrations

Table 3.5-3 Replicate Average Contaminants of Concern (COC) Concentrations

Station and Description	Total Area (A_i)	Replicate Average (C_i)				
		Copper (mg/kg)	Mercury (mg/kg)	PCBs (µg/kg)	TBT (µg/kg)	HPAH (µg/kg)
Group 1: BAE Dredged Areas (SD-COMP01)	624,819	90	0.22	1667	9.0	2261
Group 2: BAE Undredged Leasehold (SD-COMP02)	750,828	104	0.43	88	9.0	967
Group 3: BAE Outside Leasehold (SD-COMP03)	749,668	101	0.27	57	2.4	350
Group 4: NASSCO Dredged Areas (SD-COMP04)	206,703	92	0.35	157	9.0	808
Group 5: NASSCO Undredged Leasehold (SD-COMP05)	932,531	171	0.42	263	10	1821
Group 6: NASSCO Outside Leasehold (SD-COMP06)	2,967,881	123	0.34	116	7.1	585
Measured Site-Wide Surface-Area Weighted Average Concentrations (SWAC)[1]	6,232,430	121	0.34	**284**	7.5	963
2012 CAO Trigger SWAC	6,232,430	185	0.78	253	156	3,208
Above 2012 CAO Trigger SWAC?	--	No	No	**Yes**	No	No

Source: Table 1, Appendix A of 5 Year Monitoring Progress Report (Anchor QEA 2022a)

Notes:

HPAHs are the sum of six PAHs: fluoranthene, perylene, benzo[a]anthracene, chrysene, benzo[a]pyrene, and dibenzo[a,h]anthracene.

PCBs are the sum of 41 congeners: 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138,

149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

Trigger SWAC values are not applicable to group-specific results.

[1] Site-wide Surface-Area Weighted Average Concentrations (SWACs) were calculated by multiplying the dredge area of each polygon (A_i) by the average concentration of each contaminant (C_i). These area concentration products were summed and then divided by the total area to obtain the site-wide SWAC.

µg/kg: micrograms per kilogram

HPAH: polycyclic aromatic hydrocarbon with high molecular weight

mg/kg: milligrams per kilogram

PAH: polycyclic aromatic hydrocarbon

PCB: polychlorinated biphenyl

TBT: tributyltin

To evaluate the significance and cause(s) of the composite site-wide PCB SWAC value in accordance with CAO Directive D, Section 3.c.4 and 3.c.5, the ECIS was prepared. As an initial step, individual group composite sediment samples were reviewed to determine which areas of the Shipyard Sediment Site were driving the composite site-wide PCBs SWAC exceedance. Two groups (Group 1 [SD-COMP01] and Group 5 [SD-COMP05]) had PCB concentrations that were greater than the trigger SWAC concentration for the Shipyard Sediment Site.[4] Group 1, which is located in the BAE Systems leasehold, required further analysis due to the magnitude of total PCB concentration within the group (See Table 3.5-3). Group 5, which is within the NASSCO leasehold, was not a driver in the site-wide SWAC as its average PCB concentration was within a range expected to meet an average SWAC of 253 µg/kg across the Site, and thus was not evaluated further.

Based on the results from the Year 5 Progress Report and the EICS Report, an EICS Supplemental Investigation Work Plan (Anchor QEA 2022c) was developed and submitted to the Water Board on August 8, 2022. The Work Plan was prepared to obtain supplemental data which will be used to further delineate specific areas with elevated PCB concentrations, evaluate any changes in the Shipyard Sediment Site conditions since previous sampling events, and evaluate if any additional remedial actions are needed.

As documented in the EICS Supplemental Investigation Work Plan, none of the recommended additional evaluation activities are located in the South Site (i.e., NASSCO Shipyard site).

Based on the most recent *Quarterly Progress Report No. 43 – North Site San Diego Shipyard Sediment Site* (December 15, 2022; San Diego Bay Environmental Fund 2022a), the RWQCB's review of the EICS Supplemental Investigation Work Plan is anticipated to conclude in early 2023. Upon approval of the Work Plan by the Water Board, sampling and other field activities associated with the Work Plan will be planned and conducted. In addition, as noted in the *Quarterly Progress Report No. 43 – South Site San Diego Shipyard Sediment Site* (December 15, 2022; San Diego Bay Environmental Fund 2022b), the environmental monitor has recommended that no additional investigation is recommended for the South Site (NASSCO). This recommendation is still subject to RWQCB's concurrence.

3.5.3 Applicable Laws, Regulations, Plans, and Policies

3.5.3.1 Federal

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 to make all surface waters fishable and swimmable. The U.S. EPA is the lead federal agency responsible for water quality management. The CWA of 1972 (33 U.S.C. 1251–1387) is the primary federal law that governs and authorizes water quality control activities by the U.S. EPA as well as the states. The federal CWA of 1977 (33 U.S.C. 1251 et seq.), which amended the federal Water Pollution Control Act of 1972, 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

[4] Note that the trigger SWAC concentration is only applicable to the Shipyard Sediment Site as a whole, not to individual groups.

National Pollutant Discharge Elimination System (NPDES) permit is obtained and implemented within compliance. In addition, the CWA requires the states to adopt water quality standards for receiving water bodies and to 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 water quality criteria necessary to support those uses.

The proposed project would be required to comply with the CWA, as discussed in the subsections below.

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 California Toxics Rule [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. 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. Section 305(b) of the CWA requires that states assess the status of water quality conditions within the state in a report to be submitted every 2 years.

Both CWA requirements are being addressed by the SWRCB through the development of a 303(d)/305(b) Integrated Report, which will address both an update to the 303(d) list and a 305(b) assessment of statewide water quality. As noted in Section 3.6.2.2, *Surface Water Quality*, of Section 3.6, *Hydrology and Water Quality,* the SWRCB developed a statewide 2020-2022 California Integrated Report based upon the Integrated Reports from each of the nine RWQCBs. The 2020-2022 Integrated Report was approved by the EPA on May 11, 2022.

All of the 303(d) listed impaired waters with potential to be affected by the proposed project would be evaluated, and minimization measures would be implemented to protect waters from further water quality impairment.

Section 401: Water Quality Certification

Under Section 401 of the CWA, an applicant for a Section 404 permit to discharge dredged or fill material into waters of the United States must first obtain a certificate from the State Water Resources Control Board stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant water quality certification or waive the requirement is delegated by the SWRCB to the nine RWQCBs. In addition, an applicant under Section 10 of the Rivers and Harbor Act must also obtain a Section 401 Water Quality Certification.

The proposed project would require a Section 401 Water Quality Certification from the RWQCB for project activities permitted under the CWA Section 404 Permit and Rivers and Harbor Act Section 10 Permit.

Section 404: Permits for Dredged or Fill Material

Under Section 404, the USACE and U.S. EPA regulate the discharge of dredged and fill materials into the waters of the United States. These waters are primarily defined 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 only be issued 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. Additionally, no permit can be issued or verified until a water quality certification, or waiver of certification, has been issued pursuant to CWA Section 401.

The proposed project would be required to obtain and comply with a Section 404 Permit from USACE for in-water project activities that would result in dredge/fill in the San Diego Bay.

Section 10, Rivers and Harbors Act of 1899

The Rivers and Harbors Act is a 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, booms, and bulkheads, as well as to approve dredging and filling operations.

The proposed project would require a Section 10 Permit from USACE for project elements that involve the addition of new and/or replacement structures in or above the water.

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program, which is administered by the U.S. Environmental Protection Agency (EPA), to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. Under RCRA regulations, 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.

Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)

U.S. Department of Transportation (DOT) Hazardous Materials Regulations (Code of Federal Regulations [CFR] Title 49, 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 proposed project and/or surrounding uses.

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, reconditioners, and retesters 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.
- **FAA** enforces all regulations pertaining to air carriers.
- **U.S. Coast Guard (USCG)** enforces all regulations pertaining to shipments by water.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (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; and
- 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

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. 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.C. 11001 et seq.)

The Emergency Planning and Community Right-to-Know Act 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 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.

3.5.3.2 State

Cortese List

California Government Code 65962.5 (commonly referred to as the *Cortese List*) includes hazardous waste facilities and sites listed by the Department of Toxic Substances Control (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)

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, also known as the Hazardous Waste Control Act). 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).

In addition, 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 Certified Unified Program Agency (CUPA). The CUPA for San Diego County is the San Diego County Department of Environmental Health'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; or
    - 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

These standards (California Code of Regulations, Title 22 [CA 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.

California Code of Regulations, Title 8—Industrial Relations

Title 8 of the California Code of Regulations, Section 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 the proposed project. 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.

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. Similar to ACM removal, LBP removal requires proper ventilation, respiratory protection, and qualified personnel.

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.

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 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 project site is in Region 9, the San Diego Region, and 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 waste discharge requirements, NPDES permits, Section 401 water quality certifications, or 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, is offensive to the senses, or is an obstruction to property use, and which affects a considerable number of people.

Section 13304 outlines the Water Boards' authority to order cleanup and abatement efforts to an entity that has discharged waste or has allowed the discharge of waste to waters of the state or threatens to create a condition of pollution (Water Code Chapter 5, Section 13304). A cleanup and abatement order issued by the SWRCB or RWQCB may require the cleanup of waste or abatement of the effects of waste, or, in the case of threatened pollution or nuisance, take other necessary

remedial action, including, but not limited to, overseeing cleanup and abatement efforts. Water Code Section 13267 outlines the RWQCB's authority to issue an investigative order. The RWQCB, in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action related to a plan or discharge requirements, may investigate the quality of waters within the region. The RWQCB can require that responsible parties investigate the discharge or threatened discharge of toxic pollutants.

Section 13396 indicates that the state and regional water boards shall not grant approval for a dredging project that involves the removal or disturbance of sediment that contains pollutants at or above the sediment quality objectives established pursuant to Section 13393 unless the RWQCB determines all of the following: (a) The polluted sediment will be removed in a manner that prevents or minimizes water quality degradation;. (b) polluted dredge spoils will not be deposited in a location that may cause significant adverse effects to aquatic life, fish, shellfish, or wildlife or may harm the beneficial uses of the receiving waters, or does not create maximum benefit to the people of the state; and (c) the project or activity will not cause significant adverse impacts upon a federal sanctuary, recreational area, or other waters of significant national importance.

The proposed project requires compliance with the Porter-Cologne Water Quality Control Act through the existing Waste Discharge Requirements for General Dynamics National Steel and Shipbuilding Company Discharge to San Diego Bay (Order R9-2016-0116), and through compliance with any additional conditions mandated by the RWQCB under the CWA Section 401 Water Quality Certification and Porter-Cologne Water Quality Control Act.

State Water Resources Control Board Resolution Number 92-49

SWRCB Resolution Number 92-49 – *Policies and Procedures for the Investigation and Cleanup and Abatement of Discharges Under Section 13304* was adopted by the SWRCB in 1992. The resolution contains policies and procedures for the RWQCBs to follow for the oversight and regulation of investigations and cleanup and abatement activities for all types of discharges as described in Section 13304 of the Water Code (described above). Resolution No. 92-49 also provides the requirements of establishing and maintaining a site's containment zone.

State Water Resources Control Board Resolution Number No. 68-16

SWRCB Resolution Number 68-16 – *Statement of Policy Regarding Maintaining High Quality Water in California* (also known as the Antidegradation Policy) protects the quality of water bodies where the quality is higher than the established standards for the protection of beneficial uses. Any actions that adversely affect water quality in surface or groundwater must "1) be consistent with maximum benefit to the people of the State; 2) not unreasonably affect present and anticipated beneficial use of the water; and 3) not result in water quality less than that prescribed in water quality plans and policies."

Water Quality Control Plan for Enclosed Bays and Estuaries

The Water Quality Control Plan for Enclosed Bays and Estuaries: Part 1 Sediment Quality Objectives (Enclosed Bays and Estuaries Plan) was adopted by the SWRCB in 2008, and was most recently amended on June 5, 2018, to include the *Sediment Quality Provisions*. The Enclosed Bays and Estuaries Plan Sediment Quality Provisions is intended to comply with the legislative directive of Water Code Section 13393, which requires the SWRCB to adopt sediment quality objectives (SQOs). The Enclosed Bays and Estuaries Plan Sediment Quality Provisions includes measures to protect sediment-

dependent biota communities in enclosed bays and estuaries. The Sediment Quality Provisions include SQOs for the projection of aquatic life, human health, wildlife, and resident finfish.

The SQOs include:

- Narrative SQO for the protection of aquatic life.
- Narrative SQO for the protection of human health.
- Narrative SQO for the protection of wildlife* and resident finfish*.
- Identification of the beneficial uses that these SQOs are intended to protect.
- A program of implementation for each SQO that contains:
    - Specific indicators, tools and implementation provisions to determine if the sediment quality at a station or multiple stations meets the narrative objectives;
    - A description of appropriate monitoring programs; and
    - A sequential series of actions that shall be initiated when a sediment quality objective is not met, including stressor identification and evaluation of appropriate targets.
- A glossary that defines all terms denoted above by an asterisk (*).

3.5.3.3 Regional

RWQCB Municipal Stormwater Permit (Order No. R9-2013-0001)

The Municipal Stormwater Permit (Order No. R9-2013-0001 as amended by Order Nos. R9-2015-001 and R9-2015-0100) is a National Pollutant Discharge Elimination System (NPDES) Permit that requires the owners and operators of Municipal Separate Storm Sewer Systems (MS4s) within the San Diego region to implement management programs to limit discharges of pollutants and non-stormwater discharges to and from their MS4 from all phases of development. The Municipal Stormwater Permit requires the District and other "co-permittees" to develop watershed-based Water Quality Improvement Plans. 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 Water Quality Improvement Plan numeric goals.

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 unless a business or facility that handles hazardous materials has 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.

Water Quality Control Plans

The preparation and adoption of water quality control plans (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 consist of a designation or establishment of beneficial uses to be protected, water quality objectives to protect those uses, and a program of implementation needed for achieving the objectives for the waters within a specified area. 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.

The Water Quality Control Plan for the San Diego Basin (Basin Plan) was adopted by the San Diego RWQCB in 2016 and designates the Beneficial Uses and Water Quality Objectives for water bodies under its jurisdiction (RWQCB 2021). In addition, the *Water Quality Control Plan for Enclosed Bays and Estuaries: Part 1 Sediment Quality Objectives* is the water quality control plan for the San Diego Bay. See Section 3.6, *Hydrology and Water Quality,* for a detailed discussion of designated beneficial uses and objectives.

Cleanup and Abatement Order R9-2012-0024

As discussed above in Section 3.5.2.5, CAO R9-2012-0024 was issued by the San Diego RWQCB under the authority provided in Division 7 of the California Water Code, SWRCB plan and policies, and the Basin Plan. CAO R9-2012-0024 was issued for the cleanup of the contaminated sediment along the eastern shore of the Central San Diego Bay, from approximately Sampson Street Extension

to the northwest and Chollas Creek to the southeast, and from the shoreline to the San Diego Bay main shipping channel to the west. The San Diego RWQCB named NASSCO, BAE Systems, the City of San Diego, Campbell Industries, Chevron, a Subsidiary of ChevronTexaco, BP as the Parent Company and successor to Atlantic Richfield, SDG&E, the U.S. Navy, and the District as responsible persons/dischargers. CAO R9-2012-0024 ordered the responsible dischargers to take all corrective actions necessary to remediate the contamination in compliance with the required stipulations laid out in the CAO. The RWQCB analyzed the potential environmental impacts of the remediation actions required by the CAO and identified the mitigation measures required for any significant impacts associated with those actions, in the Final Environmental Impact Report (EIR) for the Shipyard Sediment Remediation Project (2011) (SCH#2009111098) and the associated Mitigation Monitoring and Reporting Program (MMRP). As indicated above in Section 1.3, CAO R9-2014-0024, the Shipyard Sediment Project EIR and the Shipyard Sediment Project MMRP are incorporated by reference in this EIR.

3.5.3.4 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.

Temporary Groundwater Extractions Permit (Order No. R9-2007-0034)

Order No. R9-2007-0034 is intended to cover temporary discharges of groundwater extraction wastes to the 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 waste discharge requirements 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 cannot, separately or jointly with any other discharge, cause violations of certain water quality objectives in the Bay.

Jurisdictional Runoff Management Plan

Under Regional Water Quality Control Board Order No. R9-2013-0001, NPDES Permit No. CAS0109266, the 18 cities within San Diego County, along with the Port of San Diego, are required to prepare Jurisdictional Runoff Management Plans (JRMPs). Each jurisdictional plan must contain a component that addresses issues related to construction activities and a component that addresses issues related to existing development. As principal permittee, the County of San Diego prepares and submits an annual report on the unified JRMP that describes the progress of the programs and the strategies to reduce the discharge of pollutants of concern to the MS4 and

receiving waters to the maximum extent practicable. Enforcement of the JRMP assists with preventing release of pollutants into the local storm drains and ultimately the San Diego Bay.

The District has developed a list of pollution prevention BMPs applicable to industrial and commercial facilities on District tidelands as required by the Municipal Stormwater Permit. Because pollution prevention BMPs eliminate pollutants at their source, they are a preferred means of preventing discharge of priority pollutants into the receiving waters. The list of pollution prevention BMPs includes the following:

- Keep waste containers covered or lids closed (trash);
- Minimize outdoor storage (trash, metals);
- Capture, contain, and/or treat wash water (bacteria, metals); and
- Conduct employee training (bacteria, trash, metals).

In addition, the JRMP provides an extensive list of minimum BMPs for commercial and industrial facilities. Categories of BMPs include general operations and housekeeping, non-stormwater management, waste handling and recycling, outdoor material storage, outdoor drainage from indoor activity, outdoor parking, vehicles and equipment, education and training, overwater activity, and outdoor activity and operation.

BMP Design Manual

In June 2015 the District adopted a jurisdiction-specific local BMP Design Manual to address the requirement of the Municipal Stormwater Permit. This BMP Design Manual is applicable to projects carried out on District-managed tidelands. Pursuant to the Municipal Stormwater Permit, the District began implementing the BMP Design Manual on February 16, 2016, and updated it in January 2018. The District's BMP Design Manual identifies updated post-construction stormwater requirements for both tenant- and District-sponsored major maintenance or capital improvement projects as required by the Municipal Stormwater Permit.

The BMP Design Manual identifies BMP requirements for both standard projects and priority development projects (PDPs) as outlined in the permit. All new development and redevelopment projects are required to implement standard source control and site design BMPs to eliminate or reduce stormwater runoff pollutants. For PDPs, the BMP Design Manual also describes structural treatment controls that must be incorporated into the site design and, where applicable, addresses potential hydromodification impacts from changes in flow and sediment supply.

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 the project construction.

San Diego Unified Port District, Article 10

The District's own Article 10, the Port Stormwater Management and Discharge Control Ordinance, prohibits the deposit or discharge of any chemicals or waste to the tidelands or San Diego Bay and

makes it unlawful to discharge pollutants directly into non-stormwater or indirectly into the stormwater conveyance system.

3.5.4 Project Impact Analysis

3.5.4.1 Methodology

The following impact analysis evaluates the potential effects from hazards and hazardous materials associated with the proposed project. Based upon the existing conditions described above, the impact analysis assesses the direct and indirect impacts related to hazards and hazardous materials by determining whether the proposed project would trigger any of the thresholds listed below.

However, an EIR is not required to analyze the environment's potential impact on a project, including any residents or users that a project may newly introduce to an existing environmental condition, unless the proposed project, by developing in an area with a known environmental condition, may exacerbate the condition. Examples of a project exacerbating an existing environmental condition specific to hazards and hazardous materials, may include constructing a structure within an area with existing soil or water contamination such that the contamination is released into the environment and causes harm to air or water quality, biological resources, or human health that would have otherwise not been affected. In this example, because the project would directly affect the existing environment, the conclusion is that the project would exacerbate the existing environmental condition. On the other hand, if the project would construct a structure within the contaminated area, but would not actually cause any release of contamination such that the potential to do greater harm to the existing environment is not present, then the project would not exacerbate the condition, even considering that by bringing new residents or users to the area, it may place more people and structures in the vicinity of an existing environmental hazard.

3.5.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of impacts associated with hazards and hazardous materials resulting from the implementation of the proposed project.

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 handle 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, create a significant hazard to the public or the environment.

5. Be located within an airport land use plan or, where such a plan has not been adopted, be within two miles of a public airport or public use airport and exacerbate a safety hazard or excessive noise for people residing or working within the vicinity of 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, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires

The analysis of whether the proposed project would have a significant impact related to hazards and hazardous materials under Thresholds 3, 5, 6, and 7 is provided in Section VIII of the Initial Study Environmental Checklist (Appendix C of this Draft EIR), which determined that the proposed project would not result in a significant impact related to these thresholds. Those conclusions and the rationale that supports them are summarized in Chapter 5, Section 5.3 *Effects Not Found to Be Significant*. Therefore, only Thresholds 1, 2, and 4 are discussed in the impact analysis that follows.

3.5.4.3 Project Impacts and Mitigation Measures

Threshold 1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Impact Discussion

Construction of the project would involve the use of hazardous materials such as fuels, lubricants, and solvents for construction equipment operation and maintenance. These materials would be properly stored, handled, used, and disposed of in accordance with applicable regulations and laws described in Section 3.5.3, which include RCRA; U.S. DOT Hazardous Materials Regulations; California Health and Safety Code; and San Diego County Code, Title 6, Division 8. In addition, OSHA provides specific standards for maintaining safe and healthy working conditions pertaining to hazardous materials in 29 CFR 1910 Subpart H. Project construction would also require the disposal of creosote-treated wood waste, which is regulated by Division 20, Chapter 6.5, and Title 22, Division 4.5 of the California Health and Safety Code (refer to Section 3.5.3 for additional information). A licensed contractor would be responsible for the removal, transportation, and disposal of the removed piles in accordance with these regulations. Any accidental release of hazardous materials due to spills or leaks would be cleaned up in the normal course of business, consistent with the above-mentioned regulations. Compliance with the above-listed regulations would ensure the safe transport, use, and disposal of hazardous materials, such that construction-related hazardous materials impacts would be less than significant.

Following completion of construction, the project would not increase the project site's operational capacity and would, therefore, not increase the use of hazardous materials on the site. The transport, use, and disposal of any hazardous materials would continue to occur in compliance with the above-mentioned regulations. As such, operational impacts related to the routine transport, use, or disposal of hazardous materials would be less than significant.

Level of Significance Prior to Mitigation

Implementation of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would be less than significant.

Threshold 2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Impact Discussion

Construction

Landside

As discussed in Section 3.5.2, there are several hazardous waste sites associated with nearby industrial properties within a 0.5-mile radius of the project site that are open or need further evaluation. However, the project would not require the disturbance of landside soils because no landside construction is proposed; therefore, the project would have no potential of exposing and releasing contaminants from impacted soils into the environment.

Waterside

Typical Work Above and Adjacent to the San Diego Bay

As described above under Threshold 1, project construction would involve the temporary use and disposal of hazardous materials and wastes, including fuels, lubricants, and solvents. These materials would be properly stored, handled, used, and disposed of in accordance with applicable regulations and laws. Although the project would comply with applicable regulations and laws, hazardous materials could be accidentally released into the San Diego Bay, which could result in a potentially significant impact to the public and wildlife (**Impact-HAZ-1**). Mitigation measures **MM-HAZ-1** through **MM-HAZ-9** would be implemented, which include procedures for prevention and containment of accidental leaks and spills, routine inspection and instrumentation of equipment, worker training, and visual hazardous materials monitoring. Compliance with regulations and implementation of measures **MM-HAZ-1** through **MM-HAZ-9** would ensure that project construction would not create a hazard to the public or environment and **Impact-HAZ-1** would be reduced to less than significant.

Removal and Disposal of Creosote Piles

Removal of the existing Repair Complex Wharf is anticipated to generate approximately 100 creosote-treated timber piles. Creosote is a tar-based substance that was used to preserve wood against rot but was found to be carcinogenic to humans and toxic to marine life through

bioaccumulation. As such, the removal and disposal of the existing piles would have a temporary potential to create a hazard to construction workers and the environment during construction, which would be a potentially significant impact. The handling, transportation, and disposal of creosote-treated wood is regulated by Division 20, Chapter 6.5, and Title 22, Division 4.5 of the California Health and Safety Code. In addition, OSHA provides specific standards for maintaining safe and healthy working conditions pertaining to hazardous materials listed in 29 CFR 1910 Subpart H. A licensed contractor would be responsible for the removal, transportation, and disposal of the removed piles in accordance with these regulations. The contractor would first remove the piles from their existing positions in the San Diego Bay floor via crane. The removed materials would then be temporarily placed in a container located on the barge. The timber piles would be managed and manifested as hazardous waste and transported for disposal at a landfill that accepts hazardous waste. Compliance with these regulations would ensure the safe management and proper disposal of creosote-treated wood and that any related hazardous materials impacts would be less than significant. Following the removal and disposal of the existing piles, new concrete or steel fender piles that would not contain a creosote coating would be installed in place of the existing wood piles. Therefore, in the long-term, the project would be beneficial because it would reduce the risk of exposure by humans and marine life to the toxic creosote coating.

Potential Disturbance of Contaminated Sediments Identified Under CAO No. R9-2012-0024

In addition, as discussed above in Section 3.5.2.5, the San Diego RWQCB issued CAO No. R9-2012-0024 for the cleanup of marine sediments within the NASSCO leasehold. As described in the CAO, the primary COCs are copper, mercury, tributyltin (TBT), high-molecular-weight polycyclic aromatic hydrocarbons (HPAHs), and polychlorinated biphenyls (PCBs). The secondary COCs are arsenic, cadmium, lead, and zinc. Remedial actions were completed in early 2016 in areas within NASSCO's leasehold identified in Figure 3.5-1, including dredging contaminated sediment and placing clean cover material over contaminated sediment that was not accessible for dredging (identified in Figures 3.5-2 and 3.5-3).

The Year 5 Progress Report and EICS Report indicated that remedial goals regarding sediment chemistry, toxicity, and bioaccumulation levels were achieved. Additionally, the composite SWAC trigger levels set by the CAO for copper, mercury, TBT, HPAHs, and PCBs were not exceeded. The Year 5 Progress Report indicated that the site-wide trigger concentrations were achieved for all primary COCs except for PCBs. Group 1, which is located in the BAE Systems leasehold, required further analysis due to the magnitude of total PCB concentration within the group (See Table 3.5-3). Group 5, which is within the NASSCO leasehold, was not a driver in the site-wide SWAC as its average PCB concentration was within a range expected to meet an average SWAC of 253 µg/kg across the Site, and thus was not evaluated further (Anchor QEA 2022a and 2022b). All of the Year 5 Progress Report findings are still pending RWQCB review and concurrence.

While clean-up actions were implemented in areas that were accessible, remedial dredging was not implemented across the entire NASSCO leasehold where intervening structures or sloping areas (required due to structural offsets) prevented access. (See Figure 3.5-1 for a location of where remediation occurred relative to the project boundaries.) Portions of the proposed project would occur within areas of identified, known contamination, as evidenced by the CAO and subsequent related documentation. Specifically, in-water construction activities would disturb existing sand and sandy gravel cover material placed as part of the remediation activities associated with CAO No. R9-2012-0024 (e.g., under the Approach Pier identified in Figure 3.5-2 and around existing revetments identified in Figures 3.5-2 and 3.5-3). In addition, the previously inaccessible area (i.e., not

previously remediated) underneath the Repair Complex Wharf would be accessible with the removal of the existing piles supporting the wharf, which, if left unmitigated, could result in the displacement of contaminated sediments. Moreover, disturbance of sediment outside of the remediation boundaries would also have the potential to disturb contaminated sediments. As a result, construction activities within the project site would have the potential to expose the underlying existing contaminated sediment to the environment, which would be a significant impact (**Impact-HAZ-2**).

As discussed in Section 3.5.3 above and in Section 3.6, *Hydrology and Water Quality,* the proposed in-water construction activities are subject to the regulatory and permitting jurisdiction of the USACE as well as the RWQCB. No in-water construction activities can occur until the project proponent obtains the necessary permits and approvals from these regulatory agencies. Prior to the commencement of construction activities, the project proponent must obtain a CWA Section 404 dredge/fill permit from USACE. Section 404 permits typically include conditions to minimize impacts on water quality, including (1) USACE review and approval of sediment quality analysis before any dredging (if proposed), (2) a detailed pre- and post-construction monitoring plan that includes disposal site monitoring, and (3) required compensation for loss of waters of the United States.

In addition, a Section 404 permit cannot be issued until a water quality certification has been issued pursuant to CWA Section 401. Under Section 401, an applicant for a Section 404 permit to discharge dredged or fill material into waters of the United States must first obtain a certificate from the RWQCB stating that the fill is consistent with the state's water quality standards and criteria. Section 401 certifications typically include conditions to minimize impacts on water quality, including (1) water sampling to determine compliance with performance standards specified in the certification, (2) construction BMPs such as silt curtains, eel grass avoidance measures, sediment dredging and remedial actions required based on post-construction monitoring results, and (3) monitoring requirements, including specific test procedures, laboratory analysis and reports, and the location, depth, frequency, equipment, and methods of water quality monitoring to demonstrate compliance with the performance standards specified in the certification.

The project also would be required to obtain a permit from the USACE under Section 10 of the Rivers and Harbors Act, which gives the USACE exclusive authority to approve construction of smaller structures, such as wharves, booms, and bulkheads, as well as to approve dredging and filling operations. These regulatory programs and permits provide additional requirements to protect water quality in the project area. Compliance with these permitting requirements will be made a condition of approval of any CDP issued by the District for the project.

In addition, the District would address the project's potential for releasing contaminated sediment into the environment by requiring **MM-HAZ-10**, which would require the project to implement a sediment management program, including a pre-construction monitoring program, a sediment management plan, and a post-construction monitoring program. In the event the post-construction monitoring program shows that criteria established by the RWQCB as part of the CWA 401 certification process are not met, the RWQCB would review and approve any remedial action required. The remedial action may include dredging, sand cover, or sand and gravel cover depending on the specific location. The RWQCB also would list conditions to the CWA 401 certification should remedial actions be necessary, which may include, but would not be limited to, the mitigation measures incorporated in the Final EIR for the Shipyard Sediment Remediation Project and included in the Shipyard Sediment MMRP, including Mitigation Measures 4.2.1 [Automatic Monitoring of Dredging], 4.2.2 [Best Management Practices], 4.2.3 [Floating Silt Curtains Around Dredging], 4.2.4 [Water Quality Monitoring During

Remedial Actions], 4.2.5 [Install Spill Plate], 4.2.6 [Clamshell Bucket Best Practices], 4.2.7 [Proper Design of Sand Cover], 4.2.8 [Controlled Placement of Sand Cover], 4.2.9 [Dredging Management Plan], 4.2.10 [Dewatering Containment Area], 4.2.11 [Avoiding Breach of Dewatering Pad], 4.2.12 [Preparation of a SWPPP], 4.2.13 [Discharge to Sanitary Sewer Requirements], and 4.2.14 [Source and Treatment Control Dredging, Transport, and Disposal Activities) and hazards materials-related (Mitigation Measures 4.3.1 [Secondary Containment], 4.3.2 [Dredging Management Plan], 4.3.3 [Contingency Plan], 4.3.4 [Health and Safety Plan], 4.3.5 [Communication Plan], 4.3.6 [Sediment Management Plan], 4.3.7 [Hazardous Materials Transportation Plan], and 4.3.8 [Traffic Control Plan]. Compliance with the RWQCB's requirements for remediation of existing contamination in areas in which project construction will occur will be made a condition of approval of any CDP issued by the District for the project. In addition, **MM-WQ-1** and **MM-WQ-2** would require implementation of silt curtains to contain spread of sediment and best practices for construction activities that would disturb the bay floor.

With implementation of mitigation measures **MM-HAZ-10, MM-WQ-1** and **MM-WQ-2** described in Section 3.6, and the mitigation measures listed in the Shipyard Sediment Remediation Project required for any remediation activities within the boundaries of CAO No. R9-2012-0024, the project would not create a significant hazard to the public or environment from upset or accident conditions involving the release of the existing contaminated sediments into the environment and impaired water body, and **Impact-HAZ-2** would be reduced to less than significant.

Operation

As for operation-related impacts, the project does not propose a change or expansion of the existing use of the site, an increase in shipbuilding and repair operations, or additional employees, other than those needed during construction. NASSCO will continue existing operations and would continue to comply with applicable regulations and laws that govern the use of hazardous materials and generation of hazardous waste, as described above in Section 3.5.3. Therefore, project operations would not result in a significant hazard to the public or environment from upset or accident conditions involving the release of impaired sediments into the environment, and impacts associated with operations would be less than significant.

Level of Significance Prior to Mitigation

Implementation of the proposed project would result in 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. Potentially significant impact(s) include:

Impact-HAZ-1: Accidental Release of Hazardous Materials into San Diego Bay. Hazardous materials could be accidentally released into the San Diego Bay during construction activities, which could result in a potentially significant impact to the public and wildlife.

Impact-HAZ-2: Potential to Encounter Waterside Contaminated Sediment in Project Area from Construction Activities. The Year 5 Post-Remedial Monitoring Progress Report (February 2022) and the subsequent Exceedance Investigation and Characterization Study Report (May 2022) indicate that the remedial goals regarding sediment chemistry, toxicity, and bioaccumulation levels were achieved in the South Site, which is where the proposed project is located. However, this finding is still pending RWQCB concurrence. Moreover, in-water construction activities, such as pile removal and installation of new and replacement piles that occur within sediment in areas that were inaccessible to remedial dredging associated with the

CAO due to intervening structures would potentially encounter and disturb contaminated sediments that could not be previously dredged. These areas include the existing Drydock Approach Pier, underneath the Repair Complex Wharf, and areas along the existing revetment. Disturbance of the cover material placed at the Drydock Approach Pier (shown in Figure 3.5-2) and along the existing revetment (shown in Figure 3.5-3) as part of the CAO remedy as well as activity underneath the Repair Complex Wharf would potentially expose the underlying contaminated sediment and redistribute COCs into the water column and across the exposed bay floor. As a result, potential adverse impacts could occur on benthic communities, bottom foraging fish, and/or plankton. Therefore, sediment disturbance within the areas identified above would be considered a significant impact.

Mitigation Measures

For **Impact-HAZ-1**:

MM-HAZ-1: Secondary Containment Structures. The project applicant shall require its contractor to ensure that oils and fuels are contained in secondary containment structures during any demolition or construction activities so that spills and leaks are contained and prevented from entering the San Diego Bay. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.

MM-HAZ-2: Hazards-related Worker Training. Prior to commencing any demolition or construction activities, the project applicant shall require its contractor to provide training to construction workers on specific task areas, including potential hazards resulting from accidental oil and/or fuel spills, and proper equipment operation. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.

MM-HAZ-3: Equipment Inspection. Prior to commencing any demolition or construction activities, the contactor and equipment operators shall conduct equipment inspections prior to use to identify and address wear, faulty parts, and leaks. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.

MM-HAZ-4: Proper Equipment Instrumentation. Prior to commencing any demolition or construction activities, the project applicant shall require its contractor to identify required instrumentation for each piece of equipment to avoid spillage of material from the barge. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.

MM-HAZ-5: Hazardous Materials Monitoring. Prior to commencing any demolition or construction activities, the project applicant shall require its contractor to assign construction personnel to visually monitor for oil and fuel spills during construction. If spilled oil or fuel is detected, all equipment shall be shut down and the source of the spill shall be identified,

contained, and reported. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.

MM-HAZ-6: Oil/Spills Kits. Prior to commencing any demolition or construction activities, the project applicant shall require its contractor to inform construction workers as to where oil/fuel spill kits are located, how to deploy the oil-absorbent pads, and proper disposal guidelines. The barge shall have a full complement of oil/fuel kits on-board throughout the construction period to allow for quick and timely implementation of spill containment. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.

MM-HAZ-7: Barge Loading Procedures. Prior to commencing any demolition or construction activities, the project applicant shall require its contractor to identify barge load limits and loading procedures and shall mark the appropriate draft level on the materials barge hull. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.

MM-HAZ-8: Removed Pile Placement. When placing pulled and removed piles and debris in the barge, the project applicant shall require its contractor to employ a flattop barge with containment walls and "skip tubs" to prevent any sediment, wood, or metal debris from falling into the water. The contractor shall locate the barge as close to shore as possible when transferring materials and/or debris on and off of the work barge. If necessary, traps shall be utilized to prevent debris from falling into the water. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.

MM-HAZ-9: Removed Material Clean-up. The project applicant shall require its contractor to clean up marine growth from removed material before disposal. The project applicant shall also require its contractor to clean up debris generated from construction activities. The contractor shall restore any piers utilized for materials staging to pre-construction conditions. This measure shall be denoted on the construction plans and/or construction contract and proof of compliance with this requirement shall be submitted by the project applicant to the District's Director of Development Services Department prior to the commencement of demolition and construction activities.

For **Impact-HAZ-2**:

Implement **MM-WQ-1** and **MM-WQ-2**, as described in Section 3.6, *Hydrology and Water Quality*.

MM-HAZ-10: Implement a Sediment Management Program. This mitigation measure requires the project applicant to prepare and implement a Sediment Management Program to avoid or reduce the potential impacts that may occur from the project's in-water construction activities disturbance of existing sediment contamination. The project's in-water construction activities will occur within areas subject to CAO R9-2012-0024 and are subject to the regulatory

jurisdiction of the RWQCB and the USACE. The project applicant must obtain a CWA Section 404 permit and a Rivers and Harbor Act Section 10 permit from the USACE and a CWA Section 401 water quality certification from the RWQCB before commencing in-water construction activities. Therefore, the Sediment Management Program shall be prepared in consultation with the RWQCB and the USACE and must be consistent with the requirements of the Section 404 and Section 10 permits issued by the USACE and the Section 401 water quality certification issued by the RWQCB for the project.

Prior to the commencement of any in-water demolition or construction activities, the project applicant shall retain a Qualified Professional, approved by the District, with substantial experience (i.e., more than 5 years) in marine sediment contamination, sediment sampling, and contamination remediation. The Qualified Professional shall prepare and oversee the implementation of a Sediment Management Program for portions of the project site where in-water construction activities have the potential to disturb sediment. The Sediment Management Program, which shall be the responsibility of the project applicant to implement, shall be in effect throughout the duration of waterside construction activities for the proposed project.

The Sediment Management Program shall include the following elements, each of which have specific timing mechanisms as identified in the description of each element below:

1. **Sampling and Analysis Plan (SAP).** Prior to any in-water demolition or construction that may potentially disturb sediment, the Qualified Professional shall (1) delineate the area of potential disturbance (Disturbance Area); (2) develop a Sampling and Analysis Plan (SAP) that includes pre-construction and post-construction sediment sampling; and (3) perform sediment sampling. The SAP, which shall include a Quality Assurance/Quality Control (QAPP) with Standard Operating Procedures (SOPs), shall apply to the entire project sediment disturbing activities and shall set forth the specific methodology to be used, the locations where sampling would occur, and proper decontamination and disposal procedures for both pre-construction and post-construction sampling and analysis. The sediment samples shall be tested for the presence of copper, mercury, tributyltin (TBT), polychlorinated biphenyls (PCBs), and high molecular weight polynuclear aromatic hydrocarbons (HPAHs), which were the primary COCs identified by the RWQCB in the CAO R9-2012-0024.

   In consultation with the RWQCB, the sampling area and sampling methodology shall identify sample locations determined to be appropriate to adequately characterize any Disturbance Area associated with the proposed project, including all areas that were not dredged as part of the CAO remediation activities because they were inaccessible but will become accessible after project implementation and will be disturbed by the project. All sediment sampling must occur prior to sediment-disturbing construction activity and shall be performed in accordance with the requirements of the SAP. The SAP must be submitted to the RWQCB and the District for review and approval, and evidence of the RWQCB's approval must be submitted to the District for verification.

2. **Sediment Characterization Report.** After completion of the preconstruction sampling, and prior to in-water construction, the Qualified Professional shall prepare a Sediment Characterization Report delineating the vertical and lateral extents and concentrations of the project site's COCs in areas where pile driving or removal and other sediment-disturbing activities are proposed as part of this project. The Sediment Characterization Report shall be

based on the pre-construction sediment sampling performed per the SAP. The project applicant shall submit the Sediment Characterization Report to the RWQCB and the District for approval as representative of existing sediment conditions in the Disturbance Area. If pre-construction sampling occurs incrementally as different phases or areas are planned for disturbance, then the Qualified Professional shall prepare technical memos documenting the different phases of sampling, which shall be submitted for review to the District and RWQCB as data is collected.

3. **Sediment Management Plan.** The Qualified Professional retained by the project applicant shall prepare a Sediment Management Plan based upon the findings of the Sediment Characterization Report described above in consultation with and subject to the approval of the RWQCB and the District. Once approved, the Sediment Management Plan shall be implemented by the project applicant and shall be subject to regulatory oversight of the RWQCB and the District. The Sediment Management Plan shall describe in detail the required actions that will be employed when disturbing sediment in the Disturbance Area to prevent waterside construction activity from creating contamination or exacerbating existing sediment contamination conditions documented in the Sediment Characterization Report. The Sediment Management Plan shall consider and be consistent with the project requirements specified in mitigation measures **MM-HAZ-1** through **MM-HAZ-9**, which include several BMPs to avoid accidental releases into the Bay waters, **MM-WQ-1**, which requires a water quality monitoring plan, and **MM-WQ-2**, which requires implementation of several water quality best management practices (BMPs), including specific requirements for sediment disturbing activities such as pile driving and double silt curtains for sediment disturbance in areas with elevated contamination.

4. **Post-Construction Sampling and Analysis.** At the conclusion of construction activities within a Disturbance Area, the Qualified Professional shall conduct post-construction sampling and analysis in accordance with the SAP (previously prepared in Step 1 above) to determine if in-water sediment disturbance activities resulted in COCs above the preconstruction levels documented in the Sediment Characterization Report. The results of the post-construction sampling and analysis shall be submitted to the RWQCB and the District, within 30 days after concluding the sampling.

5. **Remediation.** If the results of the post-construction sampling show that COC levels exceed the levels identified from the pre-construction sampling, implementation of corrective measures to restore COC levels to the levels at or below those observed in the pre-construction sampling shall be required. However, the project shall not be required to mitigate to contamination levels lower than pre-construction sampling levels to comply with this mitigation measure. These remedial actions, which shall be subject to the RWQCB's review and concurrence, may include, and may not be limited to, dredging and/or sand cover. The RWQCB shall also review the measures necessary to mitigate any potential significant effects of the remedial actions, which may include the mitigation measures incorporated in the Final EIR for the Shipyard Sediment Remediation Project and included in the MMRP, including, but not limited to, the required water quality-related mitigation measures (Mitigation Measures 4.2.1 [Automatic Monitoring of Dredging], 4.2.2 [Best Management Practices], 4.2.3 [Floating Silt Curtains Around Dredging], 4.2.4 [Water Quality Monitoring During Remedial Actions], 4.2.5 [Install Spill Plate], 4.2.6 [Clamshell Bucket Best Practices], 4.2.7 [Proper Design of Sand Cover], 4.2.8 [Controlled Placement of Sand Cover], 4.2.9 [Dredging Management Plan], 4.2.10 [Dewatering Containment Area], 4.2.11 [Avoiding

Breach of Dewatering Pad], 4.2.12 [Preparation of a SWPPP], 4.2.13 [Discharge to Sanitary Sewer Requirements], and 4.2.14 [Source and Treatment Control Dredging, Transport, and Disposal Activities) and hazards materials-related (Mitigation Measures 4.3.1 [Secondary Containment], 4.3.2 [Dredging Management Plan], 4.3.3 [Contingency Plan], 4.3.4 [Health and Safety Plan], 4.3.5 [Communication Plan], 4.3.6 [Sediment Management Plan], 4.3.7 [Hazardous Materials Transportation Plan], and 4.3.8 [Traffic Control Plan]).

6. **Progress Documentation.** The project applicant shall submit a progress report to the RWQCB and the District for their review on a recurring basis during the remediation activities that shall be no less than quarterly and may be as frequent as monthly, which shall be determined at the discretion of the RWQCB and District based on circumstances present at the time of the activities.

7. **Final Documentation.** Final documentation evidencing the completed remediation work shall also be submitted to the RWQCB and the District. Once the concentrations of COCs do not exceed the preconstruction levels documented in the Sediment Characterization Report, no further remediation is required by this mitigation measure. However, as a requirement of the CWA Section 401 certification and as the agency with primary jurisdiction over water quality in the San Diego Bay, the RWQCB may require additional steps, as appropriate, in the course of prescribing, overseeing, and enforcing conditions of the CWA Section 401 Water Quality certification as the agency deems necessary to comply with the Clean Water Act and the Porter-Cologne Water Quality Control Act.

Level of Significance After Mitigation

With implementation of **MM-HAZ-1** through **MM-HAZ-9**, **Impact-HAZ-1** would be reduced to less-than-significant levels because additional procedures would be put into place for prevention and containment of accidental leaks and spills, routine inspection and instrumentation of equipment, worker training, and visual hazardous materials monitoring.

Implementation of mitigation measure **MM-HAZ-10** requires the project proponent to implement a Sediment Management Program that would include an SAP, pre construction sampling, Sediment Characterization Report, Sediment Management Plan, post-construction sampling, potential remediation, and reporting. As a condition of approval of the CDP issued by the District for the project, the project applicant would be required to provide evidence to the District that the CWA 404 permit, the Rivers and Harbor Act Section 10 permit and the CWA 401 Water Quality Certification have been issued prior to the start of any in-water work. **MM-WQ-1** and **MM-WQ-2** also require implementation of silt curtains to contain spread of sediment and best management practices for construction activities that would disturb the bay floor. With implementation of **MM-HAZ-1** through **MM-HAZ-9**, **MM-HAZ-10, MM-WQ-1,** and **MM-WQ-2**, **Impact-HAZ-2** would be reduced to less than significant.

Threshold 4: Would the project 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, create a significant hazard to the public or the environment?

Impact Discussion

The California Environmental Protection Agency lists the following data resources that provide information regarding facilities or sites identified in California Government Code 65962.5 (commonly referred to as the "Cortese List"):

- List of Hazardous Waste and Substances sites from the DTSC EnviroStor database,
- List of LUST sites from the SWRCB GeoTracker database,
- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit,
- List of "active" Cease and Desist Actions (CDO) and CAO from the SWRCB, and
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

As listed above in Table 3.5-1, there are several landside hazardous materials sites that are open or needing evaluation associated with nearby industrial properties within a 0.5-mile radius of the project site. However, the project would not require the disturbance of landside soils because no landside construction is proposed; therefore, the project is not anticipated to create a significant hazard to the public or environment from disturbing potentially contaminated soils on landside sites.

As discussed in Section 3.5.3, the project site is identified within the boundaries of CAO R9-2012-0024. Remedial actions were completed at the project site; however, in-water construction activities could involve the disturbance of contaminated sediment cover material which may lead to encountering and releasing contaminants associated with a hazardous materials site that is listed on a database complied pursuant to Government Code Section 65962.5 (**Impact-HAZ-2**). To address this potentially significant impact, **MM-HAZ-10** would be implemented, along with **MM-WQ-1** and **MM-WQ-2**, which require implementation of silt curtains to contain spread of sediment and best management practices for construction activities that would disturb the bay floor.

With implementation of mitigation measure **MM-HAZ-10** as well as **MM-WQ-1** and **MM-WQ-2** described in Section 3.6, the project would not create a significant hazard to the public or environment regarding the existing contaminated sediments and impaired water body (San Diego Bay), and **Impact-HAZ-2** would be less than significant with mitigation incorporated.

Level of Significance Prior to Mitigation

Implementation of the proposed project would occur on sites that are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment. Potentially significant impact(s) include:

Impact-HAZ-2, as discussed under Threshold 2 above.

Mitigation Measures

For **Impact-HAZ-2**:

Implement **MM-HAZ-10**, as described under Threshold 2 above.

Implement **MM-WQ-1** and **MM-WQ-2**, as described in Section 3.6, *Hydrology and Water Quality*.

Level of Significance After Mitigation

Implementation of mitigation measure **MM-HAZ-10** requires the project proponent to implement a Sediment Management Program that would include a SAP, pre-construction sampling, Sediment Characterization Report, Sediment Management Plan, post-construction sampling, potential post-construction remediation, and reporting. **MM-HAZ-10** also requires the applicant to show evidence that the CWA Section 404 permit, Rivers and Harbors Act Section 10 permit and CWA 401 Water Quality Certification have been issued prior to the start of any in-water work. **MM-WQ-1** and **MM-WQ-2** further require implementation of silt curtains to contain spread of sediment and best management practices for construction activities that would disturb the bay floor. With implementation of **MM-HAZ-1** through **MM-HAZ-9**, **MM-HAZ-10, MM-WQ-1,** and **MM-WQ-2**, **Impact-HAZ-2** would be reduced to less than significant.

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Section 3.6
Hydrology and Water Quality

3.6.1 Overview

This section describes the existing conditions and applicable laws and regulations for hydrology and water quality, followed by an analysis of the proposed project's potential to: (1) violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality, (2) substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surfaces, and (3) conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. All other hydrology and water quality issues were addressed in Section IX of the Initial Study/Environmental Checklist (Appendix C of this Draft EIR) and determined to be less than significant. The analysis and conclusions regarding these impacts are also summarized in Chapter 5, Section 5.3, *Effects Not Found to Be Significant*.

As discussed in Section 3.6.4.3, *Project Impacts and Mitigation Measures*, all impacts related to hydrology and water quality would be less than significant after mitigation is incorporated.

3.6.2 Existing Conditions

3.6.2.1 Surface Water Hydrology

The project site is within the jurisdiction of the San Diego RWQCB. 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 and exhibits similar water quality characteristics and issues. The project site is within the San Diego Bay Watershed, which is within the Pueblo San Diego HU. The Pueblo San Diego HU is the smallest HU in San Diego County and covers approximately 60 square miles of predominantly urban landscape in the cities of San Diego, La Mesa, Lemon Grove, and National City. Approximately 75 percent of the watershed is developed. Major water features in the Pueblo San Diego HU include Chollas Creek, Paleta Creek, and San Diego Bay (Project Clean Water 2021). The Pueblo San Diego HU has no central stream system and instead consists primarily of a group of relatively small local creeks and pipe conveyances, many of which are concrete-lined and drain directly into San Diego Bay. The Pueblo San Diego HU contains three hydrologic areas: Point Loma (908.1), San Diego Mesa (908.2), and National City (908.3). The project site is in the San Diego Mesa hydrologic area, as are the San Diego Bay and Chollas Creek. The project site is adjacent to and within the San Diego Bay and northwest of Chollas Creek.

3.6.2.2 Surface Water Quality

San Diego Bay is the receiving water body for the project site, which occurs indirectly through the City's municipal storm drain system. Water quality in the San Diego Bay is influenced by processes and activities that take place within the Pueblo San Diego HU. The creeks in the watershed are highly affected by urban runoff, such as contaminants from roadways, industry, and other urban sources.

Contaminants found in San Diego Bay include chlorinated hydrocarbons, toxic components of petroleum hydrocarbons, PAHs, PCBs, heavy metals, and organotins (i.e., organic compounds with one or more tin atoms) such as tributyltin. The most significant sources of pollutants affecting the beneficial uses of San Diego Bay are urban and agricultural runoff, resource extraction, septic systems, and marinas and boating activities (Project Clean Water 2021).

Tidal exchange in San Diego Bay controls the flushing of contaminants, salt and heat balance, and residence time of water. The ebb and flow of tides mix ocean and San Diego Bay waters. Tides produce currents, which induce changes in salinity, and alternately expose and cover wet portions of the shoreline. Tidal flushing and mixing are important for dispersing pollutants, maintaining water quality, and moderating water temperature that has been affected by exchange with the atmosphere or heating. Tidal flushing and currents affect water quality in north-central San Diego Bay. Water quality also is influenced locally by freshwater inflows.

Beneficial Uses

The San Diego RWQCB is responsible for designating beneficial uses for water bodies in the San Diego region; establishing water quality objectives; and developing implementation plans to protect designated beneficial uses through the Water Quality Control Plan for the San Diego Basin (RWQCB 2021). Beneficial uses for the nearest inland surface water, Chollas Creek, include contact (potential use) and non-contact water recreation, warm freshwater habitat, and wildlife habitat. Beneficial uses for the nearest coastal water, the San Diego Bay, include industrial service supply, navigation, contact and non-contact recreation, commercial and sport fishing, preservation of biological habitats of special significance, estuarine habitat, wildlife habitat, preservation of rare, threatened, or endangered species, marine habitat, migration of aquatic organisms, spawning, reproduction and/or early development, and shellfish harvesting (San Diego RWQCB 1994, with amendments effective on or before September 1, 2021).

Total Maximum Daily Loads

CWA Section 303(d) requires the identification of water bodies that do not meet, or are not expected to meet, water quality standards (i.e., impaired water bodies). The affected water body, and associated pollutant or stressor, is then prioritized in the 303(d) List. California's current 303(d) List is the 2020-2022 List of Impaired Waters, which was approved by the U.S. EPA on May 11, 2022 (SWRCB 2022). The CWA further requires the development of a total maximum daily load (TMDL) for each listing. A TMDL is the maximum daily amount of a pollutant that a water body can receive and still safely meet water quality standards.

As shown in Table 3.6-1, water bodies with 303(d)-listed impairments with potential to be affected by the proposed project include Chollas Creek, San Diego Bay Shoreline near Chollas Creek, San Diego Bay (encompasses the project site), San Diego Bay shoreline between Sampson Street and 28th Street (encompasses the project site), and the San Diego Bay shoreline near Coronado Bridge (SWRCB 2022).

Table 3.6-1. 303(d)-Listed Impairments for Water Bodies and Adjacent Shorelines within the Project Vicinity

Reach	303(d)-Listed Impairments	Category	Source	Estimated TMDL Completion
Chollas Creek	Benthic Community Effects	Other	Unknown	2033
	Bifenthrin	Pesticides	Unknown	2027
	Copper	Metals	Unknown	--
	Chlorpyrifos	Pesticides	Unknown	2033
	Cypermethrin	Pesticides	Unknown	2025
	Malathion	Pesticides	Unknown	2025
	Nitrogen	Nutrients	Unknown	2019
	Phosphorus	Nutrients	Unknown	2019
	Trash	Trash	Unknown	2021
	Indicator Bacteria	Pathogens	Unknown	--
	Diazinon	Pesticides	Unknown	2033
	Toxicity	Total Toxics	Unknown	2033
	Trash	Trash	Unknown	2021
	Zinc	Metals	Unknown, Agriculture-grazing	--
	Lead	Metals	Unknown	--
San Diego Bay Shoreline, near Chollas Creek	Benthic Community Effects		Unknown	2010
	Sediment Toxicity		Unknown	2010
San Diego Bay	PCBs	Toxic Organics	Unknown	2019
	PAHs	Toxic Organics	Unknown	2025
	Mercury	Metals	Unknown	2027
San Diego Bay Shoreline, near Coronado Bridge	Benthic Community Effects	Other	Unknown	2019
	Sediment Toxicity	Total Toxics	Unknown	2019
San Diego Bay Shoreline, between Sampson and 28th Streets	Copper	Metals	Nonpoint source; Point source	2015
	Mercury	Metals	Major Industrial Point Source	2013
	PAHs	Toxic Organics	Nonpoint source; point source	2013
	PCBs	Toxic Organics	Major industrial point source, urban runoff/storm sewers, unknown point and nonpoint sources	2013
	Zinc	Metals	Unknown	2013

TMDL = total maximum daily load; PCBs = polychlorinated biphenyls; PAHs= Polycyclic aromatic hydrocarbons

Source: SWRCB 2022

Sediment Contamination

As discussed in Section 3.5, *Hazards and Hazardous Materials*, the San Diego RWQCB issued CAO R9-2012-0024 for sediment contamination within the General Dynamics NASSCO and BAE Systems leaseholds, which was collectively referred to as the shipyard sediment site. The shipyard sediment site was divided into the North Shipyard (the property leased by BAE Systems) and the South Shipyard (the property leased by NASSCO). As such, the project site is within the South Shipyard cleanup boundary. The CAO established cleanup levels for primary COCs, which are copper, mercury, tributyltin, PCBs, and HPAHs. Secondary COCs include arsenic, cadmium, lead, and zinc.[1]

In 2013, the San Diego RWQCB issued Order R9-2013-0093 for the waterside portions of the shipyard sediment site related to sediment remediation requirements of CAO R9-2012-0024. Order R9-2013-0093 imposed requirements that regulate discharges of waste associated with dredging activities required by CAO R9-2012-0024. Contaminated marine bay sediments adjacent to the BAE Systems and NASSCO shipyards in San Diego Bay were removed under Order R9-2013-0093 using environmental dredging techniques performed specifically for the removal of contaminated sediment while minimizing the spread of contaminants to the surrounding environment during dredging operations. The dredged sediment was off-loaded from haul barges to a landside staging area (sediment staging area or sediment management area), dewatered and solidified (onshore or on a barge), sampled for waste characterization, and transported by trucks to the appropriate landfill disposal facility. As discussed in Section 3.5, *Hazards and Hazardous Material*, approximately 28,660 cy of contaminated sediments were dredged from the South Shipyard sediment site and approximately 19,760 tons of sand material was placed as a cover (Anchor QEA, LLC 2014). Remedial activities for the South Shipyard site were completed in March 2014 and the site is currently undergoing post-remediation monitoring to evaluate the effectiveness of the cleanup.

Hazardous Material Structures in Water

The wooden components in the existing Repair Complex Wharf have been treated with creosote. Creosote is a common tar-based wood preservative that was found to be carcinogenic to humans and toxic to marine life through bioaccumulation. The primary chemicals of concern in creosote are PAHs, phenols, and creosols.

3.6.2.3 Drainage Patterns

The landside portions of the NASSCO facility are highly impervious, consisting of paved roadways, facilities, office buildings, and equipment staging and storing areas. NASSCO operates under an individual NPDES Permit (Order R9-2016-0116) and maintains a facility BMP Plan Manual. As described in Order R9-2016-0116, NASSCO operates and maintains a fully contained Storm Water Diversion System (SWDS) that is designed to capture stormwater runoff from industrial areas and prevent the discharge of industrial stormwater to the San Diego Bay. The SWDS has a capacity to retain an excess of 33,858,000 gallons, which is enough capacity to capture a 100-year storm event. Stormwater runoff from industrial high risk areas (i.e., areas where wastes or pollutants of significant quantities are produced from ship construction, modification, repair, and maintenance activities) are

[1] Secondary contaminants of concern (secondary COCs) are contaminants with lower concentrations relative to background, and are highly correlated with primary COCs and would be addressed in a common remedial Footprint (RWCQB 2012).

treated in an oil-water separator. Once treated, all stormwater captured within the facility is discharged to the San Diego Metropolitan Sewer System.

3.6.2.4 Potential Flooding and Inundation

As shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) Nos. 06073C1884H and 06073C1892H, the project site is within a Special Flood Hazard Area labeled Flood Zone AE. Flood Zone AE is an area subject to flooding during the 100-year storm event (1 percent annual chance of flooding where base flood elevations and flood hazard factors are determined) (FEMA 2019).

The project site is within a tsunami hazard area, as delineated on the Tsunami Inundation Map for Emergency Planning for the National City Quadrangle published by CGS, the University of Southern California (USC), and the California Emergency Management Agency (CalEMA), which is now known as the California Governor's Office of Emergency Services (2009). Because the project site is situated on and adjacent to the San Diego Bay, it could also be susceptible to seiche.

3.6.3 Applicable Laws, Regulations, Plans, and Policies

This section provides an overview of the pertinent federal, state, and local laws, regulations, and policies governing hydrology and water quality for the proposed project.

3.6.3.1 Federal

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 to make all surface waters fishable and swimmable. The U.S. EPA is the lead federal agency responsible for water quality management. The CWA of 1972 (33 U.S.C. 1251–1387) is the primary federal law that governs and authorizes water quality control activities by the U.S. EPA as well as the states. The federal CWA of 1977 (33 U.S.C. 1251 et seq.), which amended the federal Water Pollution Control Act of 1972, 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 within compliance. In addition, the CWA requires the states to adopt water quality standards for receiving water bodies and to 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 water quality criteria necessary to support those uses.

The proposed project would be required to comply with the CWA, as discussed in the subsections below.

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 California Toxics Rule [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. 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. Section 305(b) of the CWA requires that states assess the status of water quality conditions within the state in a report to be submitted every 2 years.

Both CWA requirements are being addressed by the SWRCB through the development of a 303(d)/305(b) Integrated Report, which will address both an update to the 303(d) list and a 305(b) assessment of statewide water quality. As noted in Section 3.6.2.2, *Surface Water Quality,* the SWRCB developed a statewide 2020-2022 California Integrated Report based upon the Integrated Reports from each of the nine RWQCBs. The 2020-2022 Integrated Report was approved by the EPA on May 11, 2022 (SWRCB 2022).

All of the 303(d) listed impaired waters with potential to be affected by the proposed project would be evaluated, and minimization measures would be implemented to protect waters from further water quality impairment.

Section 401: Water Quality Certification

Under Section 401 of the CWA, an applicant for a Section 404 permit to discharge dredged or fill material into waters of the United States must first obtain a certificate from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant water quality certification or waive the requirement is delegated by the SWRCB to the nine RWQCBs. In addition, an applicant under Section 10 of the Rivers and Harbor Act must also obtain a Section 401 Water Quality Certification.

The proposed project would require a Section 401 Water Quality Certification from the RWQCB for project activities permitted under the CWA Section 404 Permit and Rivers and Harbor Act Section 10 Permit.

Section 402: National Pollutant Discharge Elimination System Permits

Section 402(p) of the CWA was amended in 1987 to require the U.S. EPA to establish regulations for permitting of municipal and industrial (including active construction sites) stormwater discharges under the NPDES permit program. U.S. EPA published final regulations for industrial and municipal stormwater discharges on November 16, 1990. 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 are administered by the RWQCBs. U.S. EPA requires NPDES permits to be revised to incorporate waste-load allocations for TMDLs when the TMDLs are approved (40 CFR 122).

NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, or other activities.

The proposed project would be required to comply with the Waste Discharge Requirements for General Dynamics National Steel and Shipbuilding Company Discharge to San Diego Bay (Order R9-2016-0116), which serves as the NPDES permit for the NASSCO facility, as described in the Local Regulations section (Section 3.6.3.3) below.

Section 404: Permits for Dredged or Fill Material

Under Section 404, the USACE and U.S. EPA regulate the discharge of dredged and fill materials into the waters of the United States. These waters are primarily defined 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 only be issued 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. Additionally, no permit can be issued or verified until a water quality certification, or waiver of certification, has been issued pursuant to CWA Section 401.

The proposed project would be required to obtain and comply with a Section 404 Permit from USACE for in-water project activities that would result in dredge/fill in the San Diego Bay.

Section 10, Rivers and Harbors Act of 1899

The Rivers and Harbors Act is a 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, booms, and bulkheads, as well as to approve dredging and filling operations.

The proposed project would require a Section 10 Permit from USACE for project elements that involve the addition of new and/or replacement structures in or above the water.

National Toxics Rule and California Toxics Rule

USEPA adopted the National Toxics Rule (NTR) (40 CFR 131.36) on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. Approximately forty criteria in the NTR apply in California, which are provided under 40 CFR 131.36 (d)(10). On May 18, 2000, USEPA adopted the California Toxics Rule (CTR). The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

Federal Emergency Management Agency

FEMA administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues 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.

Additionally, 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.

The waterside portion of the project site falls primarily within FEMA FIRM Nos. 06073C1884H as well as 06073C1892H and would therefore be subject to FEMA regulations.

3.6.3.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Division 7 of 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 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 project site is in Region 9, the San Diego Region, and 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 waste discharge requirements, NPDES permits, Section 401 water quality certifications, or 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, is offensive to the senses, or is an obstruction to property use, and which affects a considerable number of people.

Section 13304 outlines the RWQCB's or SWRCB's authority to order cleanup and abatement efforts to an entity that has discharged waste or has allowed the discharge of waste to waters of the state, or threatens to create a condition of pollution (Water Code Chapter 5, Section 13304). A cleanup and abatement order issued by the SWRCB or RWQCB may require the cleanup of waste or abatement of the effects of waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts. Water Code Section 13267 outlines the RWQCB's authority to issue an investigative order. The RWQCB, in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action related to a plan or discharge requirements, may investigate the quality of waters within the region. The RWQCB can require that responsible parties investigate the discharge or threatened discharge of toxic pollutants.

Section 13396 indicates that the state and regional water boards shall not grant approval for a dredging project that involves the removal or disturbance of sediment which contains pollutants at or above the sediment quality objectives established pursuant to Section 13393 unless the RWQCB determines all of the following: (a) The polluted sediment will be removed in a manner that prevents or minimizes water quality degradation; (b) polluted dredge spoils will not be deposited in a location that may cause significant adverse effects to aquatic life, fish, shellfish, or wildlife or may harm the beneficial uses of the receiving waters, or does not create maximum benefit to the people

of the state; and (c) the project or activity will not cause significant adverse impacts upon a federal sanctuary, recreational area, or other waters of significant national importance.

The proposed project requires compliance with the Porter-Cologne Water Quality Control Act through the existing Waste Discharge Requirements for General Dynamics National Steel and Shipbuilding Company Discharge to San Diego Bay (Order R9-2016-0116), and through compliance with any additional conditions mandated by the RWQCB under the CWA Section 401 Water Quality Certification and Porter-Cologne Water Quality Control Act.

State Water Resources Control Board Resolution Number 92-49

SWRCB Resolution Number 92-49 – *Policies and Procedures for the Investigation and Cleanup and Abatement of Discharges Under Section 13304* was adopted by the SWRCB in 1992. The resolution contains policies and procedures for the RWQCBs to follow for the oversight and regulation of investigations and cleanup and abatement activities for all types of discharges as described in Section 13304 of the California Water Code (described above). Resolution No. 92-49 also provides the requirements for establishing and maintaining a site's containment zone.

State Water Resources Control Board Resolution Number No. 68-16

SWRCB Resolution Number 68-16 – *Statement of Policy Regarding Maintaining High Quality Water in California* (also known as the Antidegradation Policy) protects the quality of water bodies where the quality is higher than the established standards for the protection of beneficial uses. Any actions that adversely affect water quality in surface or ground water must "1) be consistent with maximum benefit to the people of the State; 2) not unreasonably affect present and anticipated beneficial use of the water; and 3) not result in water quality less than that prescribed in water quality plans and policies."

Water Quality Control Plan for Enclosed Bays and Estuaries

The Water Quality Control Plan for Enclosed Bays and Estuaries: Part 1 Sediment Quality Objectives (Enclosed Bays and Estuaries Plan) was adopted by the SWRCB in 2008, and was most recently amended on June 5, 2018, to include the *Sediment Quality Provisions*. The Enclosed Bays and Estuaries Plan Sediment Quality Provisions is intended to comply with the legislative directive of Water Code Section 13393, which requires the SWRCB to adopt sediment quality objectives (SQOs). The Enclosed Bays and Estuaries Plan Sediment Quality Provisions includes measures to protect sediment-dependent biota communities in enclosed bays and estuaries. The Sediment Quality Provisions include SOQs for the projection of aquatic life, human health, wildlife, and resident finfish.

The SQOs include:

- Narrative SQO for the protection of aquatic life.
- Narrative SQO for the protection of human health.
- Narrative SQO for the protection of wildlife* and resident finfish*.
- Identification of the beneficial uses that these SQOs are intended to protect.
- A program of implementation for each SQO that contains:

- Specific indicators, tools and implementation provisions to determine if the sediment quality at a station or multiple stations meets the narrative objectives;
- A description of appropriate monitoring programs; and
- A sequential series of actions that shall be initiated when a sediment quality objective is not met, including stressor identification and evaluation of appropriate targets.

- A glossary that defines all terms denoted above by an asterisk.

SWRCB Construction General Permit (Order 2009-0009-DWQ)

Construction activities that disturb 1 acre or more of land must obtain coverage under the SWRCB Construction General Permit (Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ and Order 2012-0006-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 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 project site. The proposed project would not be required to comply with the Construction General Permit because it would disturb less than 1 acre of land during construction.

California Coastal Act Section 30233

Section 30233 of the California Coastal Act relates to in-water work in open coastal waters, wetlands, estuaries, and lakes. Specifically, diking, filling or dredging is allowed (in accordance with other applicable provisions of the Coastal Act), where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects. Among the types of activities this section is limited to is new or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

3.6.3.3 Local

Water Quality Control Plan (Basin Plan)

The preparation and adoption of water quality control plans (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 consist of a designation or establishment of beneficial uses to be protected, water quality objectives to protect those uses, and a program of implementation needed for achieving the objectives for the waters within a specified area. Because beneficial uses, together with their corresponding water quality objectives, can be defined per federal regulations as water quality standards, the Basin Plans are regulatory references for meeting the state and federal requirements for water quality control. The project site is within the San Diego RWQCB's jurisdiction and would be required to comply with the Basin Plan.

Beneficial Uses

The San Diego RWQCB has designated Beneficial Uses and Water Quality Objectives for water bodies under its jurisdiction (RWQCB 2021). They are defined as the uses of water necessary for the survival or well-being of humans, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals of mankind. Examples include drinking, swimming, industrial, and agricultural water supply, and the support of fresh and saline aquatic habitats (RWQCB 2021).

Because of the project site's location, the receiving waters are limited to the Bay, the designated beneficial uses of which include the following.

- Industrial Service Supply (IND) includes use of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.
- Navigable (NAV) includes uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.
- Contact Water Recreation (REC1) includes uses of water for recreational activities that involve body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or the use of natural hot springs.
- Non-contact Water Recreation (REC2) includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Commercial and Sport Fishing (COMM) includes the uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.
- Preservation of Biological Habitats or Special Significance (BIOL) includes uses of water that support designated areas or habitats.
- Estuarine Habitat (EST) includes uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, or shorebirds).
- Wildlife Habitat (WILD) includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife, or wildlife water and food sources.
- Rare, Threatened, or Endangered Species (RARE) includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.
- Marine Habitat (MAR) includes uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).

- Migration of Aquatic Organisms (MIGR) includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.
- Spawning, Reproduction, and/or Early Development (SPWN) includes uses of water that support high-quality habitats suitable for reproduction, early development, and sustenance of marine fish and/or cold freshwater fish.
- Shellfish Harvesting (SHELL) includes uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters, and mussels) for human consumption, commercial, or sport purposes.

Water Quality Objectives for Inland Surface Waters, Enclosed Bays and Estuaries, Coastal Lagoons, and Ground Waters

The Basin Plan sets narrative and numerical water quality objectives that must be attained or maintained to protect beneficial uses and conform to the State's Antidegradation Policy. The water quality objectives are the levels of water quality constituents that must be met to protect the beneficial uses (San Diego RWQCB 2016). Table 3.6-2 lists these water quality constituents that received narrative or numerical concentration objectives. A complete and detailed list of water quality objectives can be found in the Basin Plan. Applicable water quality objectives are listed in Chapter 3 of the Basin Plan (starting on page 3-12 and concluding on page 3-37). For San Diego Bay, applicable objectives include those contained in the (Statewide) Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE) Plan, Enclosed Bays and Estuaries Plan, Thermal Plan, and applicable objectives starting on page 3-13 of the Basin Plan.

Table 3.6-2. Water Quality Constituents

Bacteria – Total coliform, Fecal Coliform, E. Coli, and Enterococci	pH
Biostimulatory Substances	Phenolic Compounds
Boron	Radioactivity
Chlorides	Secondary Drinking Water Standards2
Color	Sediment
Dissolved Oxygen	Sodium
Floating Material	Sulfate
Fluoride	Suspended and Settleable Solids
Inorganic Chemicals1	Tastes and Odors
Iron	Temperature
Manganese	Total Dissolved Solids
Methylene Blue–Activated Substances	Toxicity
Nitrate	Toxic Pollutants3
Oil and Grease	Trihalomethanes
Organic Chemicals	Turbidity
Pesticides	

Source: RWQCB 2021.

[1] Waters designated for use as domestic or municipal supply (MUN) cannot contain concentrations of inorganic chemicals in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Table 64431-A of section 64431 (Inorganic Chemicals), which is incorporated by reference into the Basin Plan. Inorganic chemicals include aluminum, antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, nitrate, nitrate+nitrite, nitrite, selenium, and thallium.

[2] Water designated for use as domestic or MUN cannot contain concentrations of chemical constituents in excess of the maximum contaminant levels specified in Table 64449-A of section 64449 of Title 22 of the California Code of Regulations (Secondary Maximum Contaminant Levels, Consumer Acceptance Limits), which is incorporated by reference into the Basin Plan. Includes aluminum, color, copper, corrosivity, foaming agents, iron, manganese, methyl tert-butyl ether (MTBE), odor threshold, silver, thiobencarb, turbidity and zinc.

[3] EPA promulgated a final rule prescribing water quality criteria for toxic pollutants in inland surface waters, enclosed bays, and estuaries in California on May 18, 2000 (The California Toxics Rule or "CTR" [40 CFR 131.38]). CTR criteria constitute applicable water quality criteria in California. In addition to the CTR, certain criteria for toxic pollutants in the National Toxics Rule [40 CFR 131.36] constitute applicable water quality criteria in California as well. The Shelter Island Yacht Basin portion of San Diego Bay is designated as an impaired water body for dissolved copper pursuant to Clean Water Act section 303(d). A Total Maximum Daily Load (TMDL) has been adopted to address this impairment.

Strategic Water Quality Assessment Approach for San Diego Bay

Pursuant to the requirements set forth in *The Water Quality Control Plan for Enclosed Bays and Estuaries* (2008) (discussed above), *The Strategic Water Quality Assessment Approach for San Diego Bay* was finalized by the RWQCB in December 2021 and revised in August 2022. The assessment approach builds on the RWQCB's 2012 A Framework for Monitoring and Assessment in the San Diego Region (Framework) by identifying the assessment needs for the Bay's three most important beneficial uses of waters: Habitats and Ecosystems, Fish and Shellfish Consumption, and Recreation.

The document outlines an approach for assessments that provides focused information for a better understanding of whether the RWCQB is achieving its goal of protecting and restoring the beneficial uses of the Bay's waters. The Strategic Water Quality Assessment Approach will allow the RWQCB to assess the health of the entire water body and drive decisions for management actions and resource allocation.

The assessment approach introduces a process for analyzing the data which will standardize the assessment of water quality. Primary and supplemental assessment and monitoring needs are identified to answer the Framework's questions for the three most important beneficial uses. The details of this Strategic Water Quality Assessment Approach are outlined in the tables provided in Appendix C of the assessment approach. The RWQCB will periodically assess each Framework question (conditions, stressors impacting conditions, sources of stressors, and performance of management actions) of San Diego Bay in accordance with the data analysis methods outlined in Appendix C and will use the information from the assessments to prioritize and focus its staff and resources on what is most important to achieve a healthy San Diego Bay. The monitoring effort to implement these assessments is likely too big for any one agency or existing program. The RWQCB will use its regulatory means, resources, and partnerships to collect data and encourage other parties to collect the data so that the whole community can truly understand whether the Bay's waters provide safe recreation, food, and habitats.

Although The Strategic Water Quality Assessment Approach for San Diego Bay is not a project specific approach, the proposed project would need to meet the permit conditions mandated under CWA Section 401 Water Certification to ensure no conflict with the overall goals of the Assessment Approach.

Municipal Stormwater Permit (Order R9-2013-0001 as amended by Orders R9-2015-001 and R9-2015-0100)

The Municipal Stormwater Permit (Order R9-2013-0001 as amended by Orders R9-2015-0001 and R9-2015-0100) is a NPDES permit that requires the owners and operators of MS4s within the San

Diego Region to implement management programs to limit discharges of pollutants and non-stormwater discharges to and from their MS4 during all phases of development. The Municipal Stormwater Permit requires the District and other "co-permittees" to develop watershed-based Water Quality Improvement Plans (WQIP). The intent of the Municipal Stormwater 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.

The proposed project would be required to comply with the Municipal Stormwater Permit requirements as well as any specific WQIP requirements and BMPs identified by the District to be implemented in compliance with the Municipal Stormwater Permit.

Jurisdictional Runoff Management Program

Under the Municipal Stormwater Permit (Order No R9-2013-0001), each jurisdiction is required to prepare a Jurisdictional Runoff Management Program (JRMP). Each JRMP includes a component that addresses issues related to construction activities and a component that addresses issues related to existing development. Additionally, each copermittee is required to prepare and submit an annual report that describes the implementation of programs 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 provides an overall account of the program to be conducted by the District during the 5-year life of the Municipal Stormwater Permit. 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. Port-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 taking place on District tidelands. The JRMP utilizes District-specific jurisdictional activities as well as watershed-based strategies. Enforcement of the JRMP helps to prevent stormwater pollutants from entering into the 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 post-construction BMPs into new and priority redevelopment projects. The BMP Design Manual identifies the required source-control and site-design BMPs to eliminate or reduce pollutants in stormwater runoff. For priority development projects (PDP), 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.

The District has developed a list of pollution prevention BMPs outlined in the JRMP that are applicable to industrial and commercial facilities on District tidelands as required by the Municipal Stormwater Permit. Because pollution prevention BMPs eliminate pollutants at their source, they are a preferred means of preventing discharge of priority pollutants into the receiving waters. The list of pollution prevention BMPs includes the following:

- Keep waste containers covered or lids closed (trash).
- Minimize outdoor storage (trash, metals).
- Capture, contain, and/or treat wash water (bacteria, metals).
- Conduct employee training (bacteria, trash, metals).

In addition, Table 7-4 of the JRMP provides an extensive list of minimum BMPs for commercial and industrial facilities. Categories of BMPs include general operations and housekeeping, non-stormwater management, waste handling and recycling, outdoor material storage, outdoor drainage from indoor activity, outdoor parking, vehicles and equipment, education and training, overwater activity, and outdoor activity and operation.

The proposed project would be required to follow all specific actions or BMPs set forth in the JRMP.

BMP Design Manual

In January 2018, the District adopted an updated jurisdiction-specific local *BMP Design Manual* to address the requirement of the Municipal Stormwater Permit. This *BMP Design Manual* is applicable to projects carried out on District-managed tidelands. Pursuant to the Municipal Stormwater Permit, the District began implementing the *BMP Design Manual* on February 16, 2016. The District's *BMP Design Manual* is consistent with the *Model BMP Design Manual* (Project Clean Water 2018) that was developed collectively with the other San Diego County jurisdictions. The District's *BMP Design Manual* identifies updated post-construction stormwater requirements for both tenant- and District-sponsored major maintenance or capital improvement projects, as required by the Municipal Stormwater Permit.

The *BMP Design Manual* identifies BMP requirements for both standard projects and PDPs as outlined in the permit. All new development and redevelopment projects are required to implement standard source control and site design BMPs to eliminate or reduce stormwater runoff pollutants. For 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 hierarchy for implementing pollutant control BMPs on a PDP is as follows: the standard for stormwater pollutant control is retention of the 24-hour 85th percentile stormwater volume, defined as the event that has a precipitation total greater than or equal to 85 percent of all daily storm events larger than 0.01 inch over a given period of record in the project area (design capture volume). For situations where onsite retention of the design capture volume is technically not feasible, biofiltration must be provided to satisfy specific standards. For situations where biofiltration is technically not feasible, flow-through treatment BMPs must be implemented onsite and the developer must participate in an alternative compliance project.

Site design decisions may influence the ability of a PDP to meet applicable performance standards for pollutant control and hydromodification management BMPs. For example, the layout of the site drainage and reservation of areas for BMPs relative to areas of infiltrative soils may influence the feasibility of capturing and managing stormwater. Infiltration must be avoided in areas with the following.

- Physical and chemical characteristics (e.g., appropriate cation exchange capacity, organic content, clay content, and infiltration rate) that are not adequate for proper infiltration durations and treatment of runoff for the protection of groundwater beneficial uses.

- Groundwater contamination and/or soil pollution, if infiltration could contribute to the movement or dispersion of soil or groundwater contamination or adversely affect ongoing cleanup efforts, either onsite or down-gradient of the project.

If infiltration is under consideration for one of the above conditions, a site-specific analysis should be conducted to determine where infiltration-based BMPs can be used without adverse impacts.

The depth to seasonally high groundwater tables (normal high depth during the wet season) beneath the base of any infiltration BMP must be greater than 10 feet for infiltration BMPs to be allowed. The depth to groundwater requirement can be reduced from 10 feet at the discretion of the approval agency if the underlying groundwater basin does not support beneficial uses and the groundwater quality is maintained at the proposed depth.

Concentration of stormwater pollutants in runoff is highly dependent on the land uses and activities present in the area tributary to an infiltration BMP and the receiving waters. Likewise, the potential for groundwater contamination due to the infiltration BMP is a function of pollutant abundance, concentration of pollutants in soluble forms, and the mobility of the pollutant in the subsurface soils. Therefore, infiltration BMPs must not be used for areas of industrial or light industrial activity unless source control BMPs to prevent exposure of high-threat activities are implemented, or runoff from such activities is first treated or filtered to remove pollutants prior to infiltration.

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.

The proposed project is a PDP, and therefore a SWQMP, source control BMPs, and treatment control BMPs are required.

Source Control and Site Design Requirements

The Municipal Stormwater Permit directs the District to require the development of a SWQMP during the planning process for all development projects. Both standard and PDP projects must implement source control and site design requirements.

General requirements for the BMPs to be included in the SWQMP include the following.

1. Onsite BMPs must be located so as to remove pollutants from runoff prior to its discharge to any receiving waters, and as close to the source as possible.
2. Structural BMPs must not be constructed within waters of the United States.
3. Onsite BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors (e.g., mosquitos, rodents, flies).

Source control BMPs must be implemented at all development projects where applicable and feasible. Source control BMP requirements include the following.

- Prevention of illicit discharges into the MS4.

- Storm drain system stenciling or signage.
- Protection of outdoor material storage areas from rainfall, run-on, runoff, and wind dispersal.
- Protection of materials stored in outdoor work areas from rainfall, run-on, runoff, and wind dispersal.
- Protection of trash storage areas from rainfall, run-on, runoff, and wind dispersal.
- Use of any additional BMPs determined to be necessary by the District to minimize pollutant generation at each project

Site Design BMPs must be implemented at all development projects where applicable and feasible. Site Design BMP requirements include the following.

- Maintenance or restoration of natural storage reservoirs and drainage corridors (including topographic depressions, areas of permeable soils, natural swales, and ephemeral and intermittent streams)
- Buffer zones for natural water bodies (where buffer zones are technically infeasible, project applicant is required to include other buffers such as trees, access restrictions, etc.)
- Conservation of natural areas within the project footprint including existing trees, other vegetation, and soils
- Construction of streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided public safety is not compromised
- Minimization of the impervious footprint of the project
- Minimization of soil compaction to landscaped areas
- Disconnection of impervious surfaces through distributed pervious areas
- Landscaped or other pervious areas designed and constructed to effectively receive and infiltrate, retain, and/or treat runoff from impervious areas, prior to discharging to the MS4
- Small collection strategies located at, or as close as possible to, the source (i.e., the point where stormwater initially meets the ground) to minimize the transport of runoff and pollutants to the municipal and receiving waters
- Use of permeable materials for projects with low traffic areas and appropriate soil conditions
- Landscaping with native or drought-tolerant species
- Harvesting and using precipitation

Stormwater Pollutant Control Requirements for PDPs

Redevelopment projects that create or replace 2,500 square feet of impervious surface adjacent to an environmentally sensitive waterbody (i.e., San Diego Bay) and/or fit into a specific use category as identified in the District's *BMP Design Manual* are categorized as PDPs. In addition to the site design and source control BMPs discussed above, PDPs are required to implement stormwater pollutant control BMPs to reduce the quantity of pollutants in stormwater discharges. 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 produced from a 24-hour, 85th percentile storm event (Design Capture Volume) on the project site. Section 4.5.2, Table 4-5 of the JRMP identifies the PDP categories, as defined by the Municipal Stormwater Permit and outlined in the District's *BMP Design Manual*.

The Municipal Stormwater Permit prioritizes the use of retention BMPs either as "harvest and use" or though infiltration. Full infiltration may be potentially determined to be infeasible due to high groundwater at the project site. When infiltration is infeasible, biofiltration must be considered and requires a BMP minimum footprint of 3 percent of the site area.

Construction-Related Best Management Practices

The Municipal Stormwater Permit directs the District to require minimum BMPs at all construction and grading projects. The minimum BMPs are required to ensure a reduction of potential pollutants from the project site to the maximum extent practicable and to effectively prohibit non-stormwater discharges from construction sites to the MS4. These BMPs also ensure that all construction and grading activities are in compliance with applicable District ordinances and other environmental laws and are 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 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 must be able to address rain events that may occur.

The District's JRMP also includes 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. Additionally, pursuant to strategy PO-13, the District requires sites to cover construction material stockpiles that contain metals, such as treated timber during wet weather. Table 3.6-3 provides a list of the minimum BMPs for construction sites.

Table 3.6-3. Minimum BMPs for Construction Sites

BMP Category	BMP
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 (NS-1) **Illicit Connection/Illegal Discharge Detection and Reporting (NS-6)** Dewatering Operations (NS-2) Paving and Grinding Operations (NS-3) Potable Water/Irrigation (NS-7) **Vehicle and Equipment Cleaning (NS-8)** Vehicle and Equipment Fueling (NS-9) Vehicle and Equipment Maintenance (NS-10)
Good Housekeeping/ Waste Management	**Cover construction material stockpiles such as treated lumber during wet weather (WQIP Strategy PO-13)**

BMP Category	BMP
	Material delivery and storage (WM-1)
	Material Use (WM-2)
	Solid Waste Management (WM-5)
	Stockpile Management (WM-3)
	Spill Prevention and Control (WM-4)
	Hazardous Waste Management (WM-6)
	Contaminated Soil Management (WM-7)
	Concrete Waste Management (WM-8)
	Sanitary/Septic Waste Management (WM-9)
	Construction Road Stabilization (TC-2)
	Stabilized Construction Entrances (TC-1)
	Entrance/Outlet Tire Wash (TC-3)
Erosion Control[1] (choose at least one or a combination based onsite conditions)	Preservation of Existing Vegetation (EC-2)
	Minimization of Exposure Time of Disturbed Soil Areas
	Scheduling (EC-1)[2]
	Hydraulic Mulching (EC-3)
	Soil Binders – (EC-5)
	Straw Mulches (EC-6)
	Wood Mulching – (EC-8)
	Geotextiles and Mats (EC-7)
	Wind Erosion Control (WE-1)
	Soil Preparation/Roughening (EC-15)
	Preservation of Natural Hydrologic Features Where Feasible
	Permanent Revegetation or Landscaping as Early as Feasible
Sediment Control (choose at least one or a combination based onsite conditions)	Silt Fence (SE-1)
	Street Sweeping and Vacuuming (SE-7)
	Sand Bag Barrier (SE-8)
	Storm Drain Inlet Protection (SE-10)
	Sediment Trap (SE-3)
	Sediment Basin (SE-2)
	Check Dams (SE-4)
	Fiber Rolls (SE-5)
	Gravel Bag Berms (SE-6)
	Compost Socks and Berms (SE-13)
Run-on and Runoff Control	Protect site perimeter to prevent run-on from entering the site and site runoff

Source: District 2018.

BMPs in **bold** target WQIP priority pollutants, including metals, trash, and bacteria.

[1] Erosion controls must be implemented in all inactive disturbed soil areas. An inactive disturbed soil area is where construction activities such as grading, clearing, excavation, or disturbances to ground are not occurring and those that have been active and are not scheduled to be re-disturbed for at least 14 days.

[2] Limitation of grading to a maximum disturbed area, determined by the District to be 5 acres during the rainy season and 17 acres during the non-rainy season, before either temporary or permanent erosion controls are implemented to prevent stormwater pollution (see Section 5.6.1 of the JRMP for additional information).

San Diego Unified Port District Code, Article 10

District Code, Article 10, the District Stormwater Management and Discharge Control Ordinance, prohibits the deposit or discharge of any chemicals or waste to the tidelands or San Diego Bay and makes it unlawful to discharge pollutants directly into 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. The article 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 for their contributions and/or flows.

The proposed project would be required to comply with District Code, Article 10.

Waste Discharge Requirements for General Dynamics National Steel and Shipbuilding Company Discharge to San Diego Bay (Order R9-2016-0116)

Order R9-2016-0116 serves as waste discharge requirements (WDR) pursuant to Division 7 of the California Water Code and Section 402 of the CWA and implementing regulations adopted by the U.S. EPA. The order serves as a NPDES permit authorizing NASSCO to discharge into waters of the United States at specified discharge locations subject to the WDRs. The order outlines discharge prohibitions, effluent limitations and discharge specifications, receiving water limitations, and provisions (e.g., Federal and San Diego RWQCB standards, monitoring and reporting program requirements, and BMPs). As part of Order R9-2016-0116, the project site is subject to an operational SWPPP designed to reduce or prevent the discharge of pollutants from industrial activities.

San Diego Harbor Safety Plan

The San Diego Harbor Safety Plan is designed to provide mariners using the waters of San Diego Bay an up-to-date guide to critical navigation issues that will 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, clean up, 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."

The proposed project would be required to comply with California Code of Regulations Title 14 Sections 800–802 specified in the San Diego Harbor Safety Plan.

Cleanup and Abatement Order R9-2012-0024

In 2012, CAO R9-2012-0024, *San Diego Bay Shipyard Sediment Cleanup for the NASSCO and BAE Leaseholds* (San Diego Bay Shipyard Sediment Cleanup) was issued by the San Diego RWQCB. CAO R9-2012-0024 was issued for the cleanup of the contaminated sediment along the eastern shore of central San Diego Bay, from approximately Sampson Street Extension to the northwest and Chollas Creek to the southeast, and from the shoreline to the San Diego Bay main shipping channel to the

west. The San Diego RWQCB named NASSCO, BAE Systems, the City of San Diego, Campbell Industries, Chevron, a Subsidiary of ChevronTexaco, BP as the Parent Company and successor to Atlantic Richfield, SDG&E, the U.S. Navy, and the District as responsible persons/dischargers. CAO R9-2012-0024 ordered the responsible dischargers to take all corrective actions necessary to remediate the contamination in compliance with the required stipulations laid out in the CAO. For additional information regarding the history and current status of the CAO, please see Section 3.5, *Hazards and Hazardous Materials*.

3.6.4 Project Impact Analysis

3.6.4.1 Methodology

Impacts of the proposed project on surface water quality were analyzed using available information on potential existing sources of pollution and current water quality conditions in the project area. These conditions were then compared to potential project-related sources of pollution during construction, such as sediments and other construction materials. The proposed project was also analyzed for potential impacts on beneficial uses and water quality objectives (i.e., pollutants of concern) of San Diego Bay receiving waters. Receiving and nearby waters with CWA Section 303(d) impaired water quality were identified, along with the impairment (pollutant/stressor), and an evaluation was performed of whether the impairment would have the potential to be further exacerbated by the proposed project.

3.6.4.2 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 hydrology and water quality impacts resulting from the proposed project.

Impacts are considered significant if the proposed project 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 result in: (i) substantial erosion or siltation on or off site; or (ii) substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or (iv) 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 the Initial Study/Environmental Checklist Section XVI (Appendix C of this Draft EIR), Thresholds 2, 3(i)(ii), and 4 are not included in the analysis below, as it was determined that the proposed project would result in less-than-significant impacts related to these issues. Those conclusions and the rationale that supports them are summarized in Chapter 5, Section 5.3, *Effects Not Found to Be Significant*. Therefore, only Thresholds 1, 3(iii)(iv), and 5 are discussed in the impact analysis that follows.

3.6.4.3 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 Discussion

NASSCO operates under an individual NPDES Permit (Order R9-2016-0116), maintains a facility BMP Plan Manual, and has a fully contained stormwater diversion system that prevents stormwater from discharging to receiving waters. As described in Order R9-2016-0116, the NASSCO facility includes areas where pollutants of significant quantities from ship construction, modification, repair, and maintenance activities are generated (including abrasive blast grit material, primer, paint, paint chips, solvents, oils, fuels, sludges, detergents, cleansers, hazardous substances, toxic pollutants, nonconventional pollutants, materials of petroleum origin, or other substances of water quality significance). As part of Order R9-2016-0116, the project site is subject to an operational SWPPP designed to reduce or prevent the discharge of pollutants from industrial activities.

The project proposes components that would involve in-water construction and disturbance to the bay floor. Disturbance of the bay floor would cause sediment to be temporarily resuspended, thereby increasing turbidity and potentially lowering levels of dissolved oxygen, increasing salinity, increasing concentrations of suspended solids, and possibly releasing contaminants present in the sediment into the water column (**Impact-WQ-1**). 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. Higher turbidity is expected to be confined to the specific area of pile installation. Substantially depressed oxygen levels resulting from high turbidity (i.e., below 5 milligrams per liter [mg/L]) can cause respiratory stress to aquatic life, and levels below 3 mg/L can cause mortality.

Most project components (i.e., floating dry dock replacement and modification, Repair Complex Wharf improvements, and quay wall revetment repairs [berths 2-5]) would be constructed between January 2024 to July 2026; however as-needed quay wall repairs may extend to December 2028 and structural pile repair and replacement may extend to January 2034. Construction methods with potential to result in turbidity include pile driving or internal jetting. Therefore, site-specific turbidity levels may be above ambient levels within a portion of the project site for an extended period, which may result in a potentially significant impact (**Impact-WQ-1**).

The in-water construction activities proposed by the project are subject to the regulatory jurisdiction and permitting requirements of the USACE and the RWQCB. As discussed above in Section 3.6.3.1, the proposed project would be required to obtain and comply with a CWA Section 404 Permit from USACE for in-water project activities that would result in dredge/fill in the San Diego Bay (a Water of the United States). The project also would require a Rivers and Harbor Act Section 10 Permit from USACE for project elements that involve the addition of new and/or replacement structures in or

over San Diego Bay waters. In addition, the project would require a Section 401 Water Quality Certification from the RWQCB for project activities permitted under the CWA Section 404 Permit and Rivers and Harbor Act Section 10 Permit. A RWQCB water quality certification would specify methods for ensuring the protection of water quality during in-water construction activities, including water quality monitoring requirements. In addition, specific conditions would include 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. Each of these regulatory approvals will identify specific measures which must be implemented by the proposed project to protect water quality in the project area. The project's compliance with the requirements of these permits would be included as a condition of approval of any CDP issued by the District for the proposed project.

Although temporary water quality impacts related to suspended solids in the water column would be expected, impacts related to resuspension of sediments would be reduced with implementation of the appropriate regulatory permits identified above. The CWA Section 401 Water Quality Certification would require implementation of in-water construction BMPs that would reduce water quality impacts. Common in-water construction BMPs utilized during marina projects typically include silt curtains and turbidity barriers along with trash booms. Silt curtains and turbidity barriers are designed to deflect and contain sediment within a limited area. They provide time for soil particles to fall out of suspension and help prevent these particles from being transported to other areas.

In addition to the regulatory requirements specified by the USACE and RWQCB, mitigation measure **MM-WQ-1**, required by the District, would deploy silt curtains around pile removal and pile driving areas to minimize turbidity. Silt curtains would limit the spread of the turbidity plume outside the specific work area. With implementation of **MM-WQ-1**, increased turbidity levels would be generally confined to within the area of silt curtain containment. After initial high turbidity levels within the specific work area, sediments would disperse, and background levels would be restored within hours of disturbance. In addition, tidal currents would slowly dissipate the oxygen-poor water and replenish ambient oxygen levels within one to several tidal exchanges. Therefore, suspended solids and depressed oxygen levels in the water column of the specific work area would only be expected to result in temporary and limited effects on water quality. Similarly, **MM-BIO-4** would require contractor education and the implementation of construction measures, such as silt curtains, to reduce turbidity from propeller wash and bottom disturbance.

Furthermore, NASSCO would be required to develop and implement a turbidity monitoring plan to the satisfaction of the District and the San Diego RWQCB (**MM-WQ-1**) and implement best management practices during sediment disturbances (**MM-WQ-2**). During pile removal and pile driving activities, NASSCO would be required to conduct turbidity monitoring up- and down-current of the silt curtain to ensure that turbidity does not exceed the water quality objectives established in the turbidity monitoring plan in consultation with the RWCQB. If turbidity levels down current of the silt current exceed the performance standard, construction activities would be modified, reduced, or halted until the performance standard is achieved. Moreover, internal jetting would not be allowed by the District unless the project proponent can demonstrate, to the District's satisfaction, that there are no feasible alternatives to the use of internal jetting (**MM-WQ-2**). (Note that the RWQCB may still not permit internal jetting if the RWQCB determines that it cannot issue the 401 Water Quality Certification or finds the action inconsistent with the Porter-Cologne Act.) Therefore, upon compliance with the regulatory approvals which must be obtained from the USACE and the RWQCB and with the incorporation of **MM-BIO-4, MM-WQ-1**, and **MM-WQ-2**, **Impact-WQ-1** would be reduced to a level below significance.

As discussed in Section 3.5, *Hazards and Hazardous Materials*, construction activities have the potential to result in the accidental release of hazardous wastes and materials into the San Diego Bay, which would also potentially result in a water quality-related impact (**Impact-WQ-2**). Project construction would involve the use and disposal of hazardous waste, including fuels, lubricants, and solvents. These materials would be properly stored, handled, used, and disposed of in accordance with applicable laws, regulations, and policies listed in Section 3.5.3 as well as **MM-HAZ-1** through **MM-HAZ-9,** and would require specific measures to avoid potentially adverse impacts on water quality, including secondary containment of hazardous materials (e.g., oils and fuels), equipment inspection to avoid leaks, spill kits to prevent spills from entering the bay, barge loading procedures to avoid overloading barges, and use of a flattop barge with containment walls to prevent debris from entering the water. In addition, best management practices for work that would potentially disturb the bay floor would be required (**MM-WQ-2**). With implementation of mitigation measures **MM-HAZ-1 through MM-HAZ-9** and **MM-WQ-2**, **Impact-WQ-2** would be reduced to less than significant.

As also discussed in Section 3.5, *Hazards and Hazardous Materials*, the San Diego RWQCB issued CAO R9-2012-0024 for sediment contamination from past activities within the NASSCO and BAE Systems leaseholds. The primary COCs for the cleanup site sediments include copper, mercury, HPAHs, PCBs, and tributyltin. Secondary COCs include arsenic, cadmium, lead, and zinc.[2] Contaminated marine bay sediments were removed from the contamination site under Order R9-2013-0093 using environmental dredging techniques. However, sand or gravelly sand covers were placed in four areas within the NASSCO leasehold where dredging activities would have threatened the stability of the slopes or in-water structures (refer to Section 3.5.2.4 in Section 3.5, *Hazards and Hazardous Materials*, for additional information). As such, the contamination present in those sediments was not removed, but was covered to prevent mixing of contaminants with the water column and clean sediment. In addition, the area under the Repair Complex Wharf was also inaccessible to dredging and sand cover (Anchor QEA 2012).

The proposed pile removal and replacement has potential to disturb contaminated sea-floor sediments associated with CAO R9-2012-0024, which may result in a potentially significant water quality impact (**Impact-WQ-3**). The RWQCB has regulatory and permitting jurisdiction over such in-water construction activities within the project site pursuant to CAO R9-2014-0024, as well as the Porter Cologne Act (e.g., Section 13396 [Dredging Certification]), and may require additional sediment quality remediation measures, including but not limited to dredging and/or sand covering. Any remediation activities that may be needed would be reviewed by the RWQCB and subject to the mitigation measures identified in the RWQCB's Final Environmental Impact Report for the Shipyard Sediment Remediation Project (2011) (SCH#2009111098) and the associated Mitigation Monitoring and Reporting Program (MMRP) and any other conditions imposed on the disturbance actions pursuant to the RWQCB's authority under the CWA and Porter-Cologne Water Quality Control Act.

In addition, as described in Section 3.5, mitigation measure **MM-HAZ-10** would require implementation of a sediment management program and post-construction sampling and reporting. It would also ensure that the project proponent's compliance with any remediation activities and related mitigation measures that may be required by the RWQCB is made a condition of approval of any CDP issued by the District for the proposed project. With implementation of mitigation measure **MM-HAZ-10**, **Impact-WQ-3** would be reduced to less than significant.

[2] Secondary contaminants of concern (secondary COCs) are contaminants with lower concentrations relative to background, and are highly correlated with primary COCs and would be addressed in a common remedial Footprint (RWCQB 2012).

The proposed project does not propose any increase in project operations. As such, project implementation would not result in a change in the type or quantity of pollutants that would be generated during operations. Stormwater runoff from the NASSCO facility, including the new overwater structures, would be captured and contained in the existing SWDS system for subsequent discharge to the San Diego Metropolitan Sanitary Sewer System. NASSCO would be required to maintain all existing operational and maintenance BMPs and comply with Order R9-2016-0116, which regulates polluted runoff, for the new overwater structures.

In summary, the project would not substantially degrade surface or groundwater quality or violate water quality standards or waste discharge requirements through compliance with permit conditions and through the implementation of mitigation measures **MM-HAZ-1** through **MM-HAZ-10, MM-BIO-4, MM-WQ-1**, and **MM-WQ-2**. Therefore, **Impact-WQ-1**, **Impact-WQ-2**, and **Impact-WQ-3** would all be reduced to less than significant with mitigation incorporated.

Level of Significance Prior to Mitigation

Implementation of the proposed project would potentially violate water quality standards or otherwise substantially degrade existing water quality. Potentially significant impact(s) include the following.

Impact-WQ-1: Degradation of Water Quality from Sediment Disturbance During In-Water Construction. The project proposes components that would involve in-water construction and disturbance to the bay floor. Disturbance of the bay floor would cause sediment to temporarily be resuspended, thereby increasing turbidity and potentially lowering levels of dissolved oxygen, increasing salinity, increasing concentrations of suspended solids, and potentially releasing chemicals present in the sediment into the water column within as well as outside the project's boundaries. Impacts would be significant.

Impact-WQ-2: Degradation of Water Quality from Accidental Release of Hazardous Materials into San Diego Bay. Project construction would involve the use and disposal of hazardous waste, including fuels, lubricants, and solvents. These hazardous materials could be accidentally released into the San Diego Bay during construction activities, which could result in a potentially significant impact on water quality.

Impact-WQ-3: Waterside Potential to Encounter Hazardous Materials in Sediment in Previously Inaccessible Areas. The San Diego RWQCB issued CAO R9-2012-0024 for sediment contamination within the NASSCO and BAE Systems leaseholds. Contaminated marine bay sediments were removed from some locations within the Shipyard Sediment site under Order R9-2013-0093 using environmental dredging techniques. However, sand or gravelly sand covers were placed in four areas within the NASSCO leasehold where dredging activities would have threatened the stability of the slopes or in-water structures. As such, the contamination present in those sediments was not removed, but was covered to prevent mixing of contaminants with the water column or clean sediment. A fifth area under the Repair Wharf Complex was inaccessible to dredging and sand cover and it is probable that contaminants are present at elevated concentrations in surficial sediments at this location. The project would allow access into these previously inaccessible areas. The proposed pile removal and replacement has potential to disturb contaminated sea-floor sediments associated with prior activities that have occurred under CAO R9-2012-0024, which may result in a potentially significant water quality impact.

Mitigation Measures

For **Impact-WQ-1:**

Implement mitigation measure **MM-BIO-4** as described in Section 3.2, *Biological Resources*.

MM-WQ-1: Provide Evidence of Section 401 Water Quality Certification and Monitor Turbidity and Constituents of Concern During Construction-Related Sediment Disturbance. Prior to commencing construction activities in water that have the potential to disturb sediments, the proposed project must provide evidence to the District that the Section 401 CWA certification has been obtained from the Regional Water Quality Control Board (RWQCB) for sediment-disturbing activities.

Unless the RWQCB requires additional or alternative measures that provide an equivalent or greater degree of environmental protection as conditions for the issuance of the CWA Section 401 Water Quality Certification, the project proponent shall implement the following steps to ensure the proposed project does not violate the water quality objectives of the Basin Plan or hinder implementation of or otherwise conflict with the RWQCB's Framework for Monitoring and Assessment in the San Diego Region and Strategic Water Quality Assessment Approach for San Diego Bay.

- Retain a water quality specialist with at least 5 years of water quality monitoring experience to prepare a water quality monitoring plan and conduct water quality monitoring to demonstrate to the District and the RWQCB that in-water construction activities do not violate the Basin Plan or applicable water quality objectives.
- Obtain approval of the water quality monitoring plan from the District and RWQCB (related to the CWA Section 401 water quality certification) before in-water construction activities may be initiated.
- The water quality monitoring plan shall incorporate:
    - (1) all permit-specific regulatory monitoring and reporting requirements (e.g., CWA Section 401 conditions), and
    - (2) a detailed description of the proposed water quality monitoring plan, which shall clearly identify the project boundaries, chemical constituents of concern, and water quality objectives identified in consultation with the RWCQB, the agency with the primary jurisdiction over water quality in the San Diego Bay.

  The water quality monitoring plan shall also 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 shall be designed to indicate if 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. If water column monitoring indicates exceedances of water quality objectives identified in consultation with the RWQCB (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 except in those instances where measurements such as water temperature and pH can be determined immediately in the field and not jeopardize the samples by exceeding transportation time to the lab for analysis.

The designated water quality monitor shall ensure that turbidity does not extend outside of the immediate construction area. Depending upon the requirements in the permit, the water quality monitor may stop construction work and shall alert the regulatory agencies (e.g., RWQCB) 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 Water Quality Best Management Practices During Construction. During construction activities, BMPs, which must be listed in the contractor specifications and plans and with evidence provided to the District, shall be implemented by the project proponent and shall include the following:

- The contractor shall fully understand and adhere to the terms and conditions of approvals and permits obtained as well as all project BMPs.
- All construction activities shall occur within the designated project footprint.
- Disturbance to the ocean bottom and intertidal areas shall be minimized.
- 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.
- Appropriate types and sufficient quantities of materials shall be maintained onsite to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the United States and/or State.
- The project applicant (NASSCO) shall properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or stormwater runoff. The storage, handling, treatment, or disposal of waste shall not create conditions of pollution, contamination, or nuisance as defined in the California Water Code Section 13050.
- Netting, sandbags, tarps, or other forms of barriers shall be placed around staging areas to prevent debris from entering the water.
- All equipment must be washed prior to transport to the project site and must be free of sediment, debris, and foreign matter. All equipment used in direct contact with surface water shall be steam-cleaned prior to use. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors, pumps, generators, etc.) shall be positioned over drip plans or other types of containment.
- Floating booms shall be maintained around the project area to capture floating debris. Divers shall recover non-buoyant debris from the bay bottom within 72 hours of known

condition. All debris and trash shall be collected and disposed of in appropriate waste containers by the end of each construction day.

- Following project completion, all project-generated debris, building materials, excess material, waste, and trash shall be removed from the project site for disposal at an authorized landfill or other disposal site in compliance with federal, state, and local laws and regulations.
- All debris and trash shall be collected and disposed of in appropriate waste containers by the end of each construction day.
- Discharge of hazardous materials into the project site shall be prohibited.
- Load-controlled boat movement, line attachment, and/or horsepower requirements of tugs and support boats at the project site must be specified to avoid resuspension of sediment. Such measures may include speed restrictions, establishment of off-limit areas, and use of shallow draft vessels.
- NASSCO shall deploy and maintain a continuous length of silt curtain(s) fully surrounding in-water project activities to control and contain the migration of resuspended sediments at the water surface and at depth. Silt curtain deployment shall be in conformance with the following requirements:
    - The silt curtains must be comprised of Type III geotextile material.
    - The silt curtains must restrict the surface visible turbidity plume or surface debris to the area of construction and sediment disturbance and must control and contain the migration of resuspended sediments or debris at the water surface and at depth.
    - The silt curtain must be maintained as a full turbidity enclosure. The silt curtains must be supported by floating debris booms in open water areas such as along the bayward side of the area of disturbance. Along the pier edges, the silt curtains may be connected to the pier structure.
    - The bottom of the silt curtains must be weighted with ballast weights or rods affixed to the base of the fabric to resist the natural buoyancy of the silt curtain fabric and lessen its tendency to move in response to currents. Where feasible and applicable, the floating silt curtains must be anchored and deployed from the surface of the water to just above the substrate.
    - If necessary, silt curtains with tidal flaps must be installed to facilitate curtain deployment in areas of higher flow. Based on a determination of the District, and subject to concurrence from the RWQCB pursuant to the Federal Clean Water Act (CWA) and Porter-Cologne Water Quality Control Act, air curtains may be used in conjunction with silt curtains to contain resuspended sediment, enhance worker safety, and allow barges to transit into and out of the work area without the need to open and close silt curtain gates.
    - Silt curtains must be continuously monitored for damage, dislocation, or gaps and must be immediately repaired where it is no longer continuous or where it has loosened.
    - Silt curtains must not be removed until the visible turbidity plume has dissipated and/or surface debris is skimmed and removed.

- Sediment disturbance within the remedial boundaries identified in Figure 3.5-1, 3.5-2, and 3.5-3 shall require double silt curtains in place of single silt curtains.

- 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 issued by the United States Army Corps of Engineers and CWA Section 401 Water Quality Certification issued by the Regional Water Quality Control Board. Impact hammer pile driving, internal jetting, or spudding may be required based on the type of pile installation, or removal, that occurs. The following additional measures shall be required based on the type of pile installation, or removal, that occurs.

  - Impact Hammer Pile Driving

    Turbidity curtains shall be installed by the proponent in compliance 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 2019a).

  - Spudding

    Spudding shall not be allowed unless the project applicant can demonstrate, to the District's satisfaction, there are no feasible alternatives to the use of spudding. If no alternatives to spudding are feasible, when spuds are lifted during in-water construction, they 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.

  - Internal Jetting

    Internal jetting shall not be allowed unless the project applicant can demonstrate, to the District's satisfaction, there are no feasible alternatives to the use of internal jetting. If no alternatives to internal jetting are feasible, the use of internal jetting shall be subject to the installation of double silt curtains regardless of location within the project site (**MM-WQ-2**), post-construction monitoring (**MM-WQ-1**) and limitations on water flow rate, jet nozzle velocity, and duration as determined by the RWQCB during the Section 401 permitting process.

This measure shall also be implemented along with **MM-HAZ-1** through **MM-HAZ-10**. Furthermore, this measure shall apply unless the RWQCB, the government agency charged with enforcement of the Federal Clean Water Act and State Porter-Cologne Water Quality Control Act, finds that additional or alternative measures which provide an equivalent or greater degree of environmental protection are appropriate and required in order to issue the CWA Section 401 Water Quality Certification.

For **Impact-WQ-2:**

Implement mitigation measures **MM-HAZ-1** through **MM-HAZ-9** as described in Section 3.5, *Hazards and Hazardous Materials*.

Implement mitigation measure **MM-WQ-2** as described above.

For **Impact-WQ-3:**

Implement mitigation measure **MM-HAZ-10** as described in Section 3.5, *Hazards and Hazardous Materials*.

Level of Significance after Mitigation

With implementation of **MM-BIO-4, MM-WQ-1**, and **MM-WQ-2**, **Impact-WQ-1** would be reduced to less-than-significant levels. **MM-BIO-4** requires contractor education and the implementation of construction measures, such as silt curtains, which will facilitate continued underwater foraging, in accordance with regulations. **MM-WQ-1** would require NASSCO to develop and implement a turbidity monitoring plan to the satisfaction of the District and the San Diego RWQCB and the deployment of silt curtains around pile removal and pile driving areas to limit the spread of the turbidity plume outside the specific work area. **MM-WQ-2** would require the implementation of best management practices during sediment disturbances.

In addition, implementation of **MM-HAZ-1** through **MM-HAZ-9** and **MM-WQ-2** would reduce potential impacts associated with the accidental release of hazardous wastes and materials into the San Diego Bay during in-water construction (**Impact-WQ-2**) to less than significant by requiring specific measures to avoid potentially adverse impacts on water quality, including secondary containment of hazardous materials (e.g., oils and fuels), equipment inspection to avoid leaks, spill kits to prevent spills from entering the bay, barge loading procedures to avoid overloading barges, and use of a flattop barge with containment walls to prevent debris from entering the water. In addition, best management practices for work that would potentially disturb the bay floor would be required.

Further, in addition to compliance with the requirements of the CWA Section 404 and Rivers and Harbors Act Section 10 permits issued by the USACE and the CWA Section 401 water quality certification issued by the RWQCB, implementation of mitigation measure **MM-HAZ-1** through **MM-HAZ-10, MM-WQ-1** and **MM-WQ-2** would be required by the District to reduce potential impacts from the disturbance of contaminated sea-floor sediments associated with past contamination identified and remediated under CAO R9-2012-0024 (**Impact-WQ-3**) to less than significant by requiring implementation of a sediment management program, requiring a water quality monitor, and implementing BMPs, including for direct disturbance to sediment.

Threshold 3: Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:

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 Discussion

Stormwater Drainage Capacity

NASSCO operates under an individual NPDES Permit (Order R9-2016-0116), maintains a facility BMP Plan Manual, and has a fully contained stormwater diversion system where discharging to the San Diego Bay does not occur. As described in Order R9-2016-0116, the NASSCO facility includes areas where pollutants from ship construction, modification, repair, and maintenance activities are generated (including abrasive blast grit material, primer, paint, paint chips, solvents, oils, fuels, sludges, detergents, cleansers, hazardous substances, toxic pollutants, nonconventional pollutants, materials of petroleum origin, or other substances of water quality significance). As part of Order R9-2016-0116, the project site is subject to an operational SWPPP designed to reduce or prevent the discharge of pollutants from industrial activities.

Although it does not propose any change or expansion of existing uses, the project would result in a net increase in overwater coverage of 10,210 square feet for permanent structures (i.e., floating dry dock, mooring dolphins, approach pier fender system, and Repair Complex Wharf) and 300 square feet for temporary structures (i.e., catwalk and removable brow). NASSCO would be required to maintain all existing operational and maintenance BMPs and comply with the RWQCB's Order R9-2016-0116, which regulates polluted runoff, for the new overwater structures. NASSCO's existing NPDES permit would be updated to reflect the increase in overwater coverage, as may be required by the RWQCB. As discussed above, NASSCO operates and maintains a fully-contained SWDS that is designed to capture stormwater runoff from industrial areas and prevent the discharge of industrial stormwater to the San Diego Bay. The SWDS has a capacity to retain an excess of 33,858,000 gallons, which is enough capacity to capture a 100-year storm event, including when accounting for the additional surface areas proposed by the project. All stormwater captured from the NASSCO facility, including the new overwater structures, would be discharged from the existing SWDS system to the San Diego Metropolitan Sewer System.

Project implementation would not result in a change in the type or quantity of pollutants that would be generated and would not result in a substantial increase in stormwater runoff during operations. Stormwater runoff from the NASSCO facility would continue to be captured and contained for subsequent discharge to the San Diego Metropolitan Sanitary Sewer System. The SWDS and sanitary sewer system would have adequate capacity for any increases in stormwater from the proposed increase in overwater coverage.

Based on the above discussion, the project would not contribute additional sources of polluted runoff and the existing SWDS and sanitary sewer system would have sufficient capacity to

accommodate any increase in stormwater from the proposed increase in overwater coverage. Therefore, impacts would be less than significant.

Flood Flows

As shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) No. 06073C1884H and 06073C1892H, the project site is within Flood Zone AE, which is an area subject to flooding during the 100-year storm event (1 percent annual chance of flooding where base flood elevations and flood hazard factors are determined). FEMA defines base flood elevation as the elevation that floodwaters are expected to rise during a flood event with a one percent chance of occurring in any given year. The base flood elevation within the project site is 11 feet (FEMA 2019).

During project construction, all proposed construction elements would be over water and would not have potential to impede or redirect flood flows. 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.

The project would include the repair and replacement of in-water structures. All permanent structures proposed within Flood Zone AE must be designed to ensure that the floor elevation is raised at least one foot above the floodplain elevation and meets the structural requirements of the FEMA National Flood Insurance Program to avoid any damage to persons or structures from a 100-year flood. Review of all permanent structure design plans designed by a professional engineer by the District's Engineering Department is a standard requirement as part of the project review process. As compliance with this process is mandatory, no mitigation is needed.

The District's Sea Level Rise Vulnerability Assessment and Coastal Resiliency Report (District 2019b) includes a sea level rise (SLR) vulnerability assessment for Planning District 4 (Tenth Avenue Marine Terminal Planning District). Based on the assessment, this planning district is projected to withstand potential SLR inundation and temporary flooding from SLR during a 100-year storm event at 1.6 feet of projected SLR (anticipated in the year 2050). The higher elevation and existing shoreline armoring are expected to protect many of the land uses in the planning district from substantial projected SLR impacts. Several project components, including areas where quay wall revetment and pile repairs or replacement would occur, may be affected by mean SLR during the useful design life (i.e., 30 years) of the various project elements. However, these project elements are intended to protect the shoreline and improve SLR resiliency through addressing existing revetment failures and structural pile deficiencies. In addition, these project elements would not substantially increase in-water fill volumes and, therefore, would not have potential to impede or redirect flood flows. Furthermore, this type of inundation would occur with or without the proposed project. Consequently, the project is not anticipated to exacerbate existing or projected damage to the environment due to SLR.

Based on the above discussion, the project would not exacerbate the flooding potential of the project site or the effects of flooding on the existing environment. Therefore, impacts would be less than significant.

Level of Significance Prior to Mitigation

Implementation of the proposed project would not substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would 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. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Threshold 5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Discussion

The water quality control plans that apply to the project site are the San Diego Basin Plan and the Water Quality Control Plan for Enclosed Bays and Estuaries: Part 1 Sediment Quality Objectives, both of which are described in Section 3.6.3*, Applicable Laws, Regulations, Plans, and Policies*.

As discussed in Threshold 1 above, NASSCO operates under an individual NPDES Permit (Order R9-2016-0116), maintains a facility BMP Plan Manual, and has a fully contained stormwater diversion system that prevents stormwater from discharging to receiving waters. The proposed project does not propose any increase or expansion of the operations and therefore project operations would not conflict with or otherwise obstruct the Basin Plan or the Water Quality Control Plan for Enclosed Bays and Estuaries: Part 1 Sediment Quality Objectives.

In addition, and also as discussed under Threshold 1 above, NASSCO, and any of its contractors, would be required to comply with permit conditions imposed by USACE and the RWQCB during construction. Specifically, permits required include the CWA Section 401 Water Quality Certification issued by the RWQCB and the Section 404 permit and Section 10 Rivers and Harbors Permit issued by the USACE. These permits will provide specific conditions to ensure the proposed project does not violate the Clean Water Act, Porter Cologne Water Quality Control Act, and does not hinder implementation of or otherwise conflict with the RWQCB's Basin Plan and Water Quality Control Plan for Enclosed Bays and Estuaries.

Moreover, the District as the lead CEQA agency, requires implementation of mitigation measures **MM-HAZ-1** through **MM-HAZ-10**, **MM-BIO-4**, **MM-WQ-1,** and **MM-WQ-2**, as described under Threshold 1. These measures would be implemented to reduce potential impacts on water quality from temporary increases in turbidity from disturbance of bay sediments (**Impact-WQ-1**), the accidental release of potentially hazardous materials and wastes (**Impact-WQ-2**), and disturbance of known existing contaminated sediments currently sand or gravelly sand covered as a result of the implementation of CAO R9-2012-0024 (**Impact-WQ-3**). Moreover, these mitigation measures would also help to ensure the policies and plans are not violated.

The groundwater basin, Coastal Plain of San Diego, is considered a low priority groundwater basin and is not overdrafted. As discussed in Section 5.3, *Effects Not Found to be Significant*, the project would not have potential to decrease groundwater supplies, impair groundwater quality, or affect groundwater recharge. Therefore, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant with mitigation incorporated.

Level of Significance Prior to Mitigation

Implementation of the proposed project would potentially conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Potentially significant impact(s) include the following.

Impact-WQ-1, **Impact-WQ-2**, and **Impact-WQ-3** as discussed under Threshold 1 above.

Mitigation Measures

For **Impact-WQ-1:**

Implement mitigation measure **MM-BIO-4** as described in Section 3.2, *Biological Resources*.

Implement mitigation measures **MM-WQ-1** and **MM-WQ-2** as described in Threshold 1 above.

For **Impact-WQ-2:**

Implement mitigation measures **MM-HAZ-1** through **MM-HAZ-9** as described in Section 3.5, *Hazards and Hazardous Materials*.

Implement mitigation measure **MM-WQ-2** as described above in Threshold 1 above.

For **Impact-WQ-3:**

Implement mitigation measures **MM-WQ-1** and **MM-WQ-2** as described in Threshold 1 above.

Implement mitigation measure **MM-HAZ-10** as described in Section 3.5, *Hazards and Hazardous Materials*.

Level of Significance after Mitigation

With implementation of **MM-BIO-4, MM-WQ-1**, and **MM-WQ-2**, **Impact-WQ-1** would be reduced to less-than-significant levels. **MM-BIO-4** requires contractor education and the implementation of construction measures, such as silt curtains, which will facilitate continued underwater foraging, in accordance with regulations. **MM-WQ-1** would require NASSCO to provide evidence to the District of receipt of the CWA Section 401 Water Quality Certification and Section 404 permit prior to initiating in-water work with the potential to disturb sediments as well to develop and implement a turbidity monitoring plan to the satisfaction of the District and the RWQCB through the deployment of silt curtains around pile removal and pile driving areas to limit the spread of the turbidity plume outside the specific work area. **MM-WQ-2** would require the implementation of best management practices during sediment disturbances.

In addition, implementation of **MM-HAZ-1 through MM-HAZ-9** and **MM-WQ-2** would reduce potential impacts associated with the release of hazardous wastes and materials into the San Diego Bay during in-water construction (**Impact-WQ-2**) to less than significant by requiring specific measures to avoid potentially adverse impacts on water quality, including secondary containment of hazardous materials (e.g., oils and fuels), equipment inspection to avoid leaks, spill kits to prevent spills from entering the bay, barge loading procedures to avoid overloading barges, and use of a flattop barge with containment walls to prevent debris from entering the water. In addition, best management practices for work that would potentially disturb the bay floor would be required.

Further, implementation of mitigation measure **MM-HAZ-1 through MM-HAZ-10, MM-WQ-1,** and **MM-WQ-2** would be required by the District to reduce potential impacts from the disturbance of contaminated sea-floor sediments associated with past contamination identified and remediated under CAO R9-2012-0024 (**Impact-WQ-3**) to less than significant by requiring implementation of a sediment management program, requiring a water quality monitor, and implementing water quality BMPs, including for direct disturbance to sediment.

Section 3.7
Land Use and Planning

3.7.1 Overview

This section considers whether existing land uses could be adversely affected by the proposed project; outlines the applicable laws, regulations, and policies related to land use and planning; and analyzes the proposed project's potential to conflict with applicable plans and regulations, such as the California Coastal Act (CCA). For a conflict analysis with the District's Maritime Clean Air Strategy (MCAS) and the California Air Resources Board's Community Emissions Reduction Program (CERP), please see Section 3.1, *Air Quality and Health Risk*.

As discussed in Section 3.7.4.3, *Project Impacts and Mitigation*, all impacts related to land use and planning would be less than significant after mitigation is incorporated.

3.7.2 Existing Conditions

The project site occupies land and water that is under the jurisdiction of the District and within the City of San Diego. In total, the District has jurisdiction over approximately 5,500 acres of tide and submerged lands (Tidelands), or about 37 percent of the total Tidelands on the Bay. The District's Port Master Plan (PMP) governs the land and water uses on Tidelands that the State Legislature has granted to the District, as trustee, and for which the District has regulatory duties and proprietary responsibilities. Land use designations in the PMP are composed of approximately 15 percent commercial, 24 percent industrial, 19 percent public recreation, 28 percent conservation, 11 percent public facility, and 3 percent military (District 2020a).

The PMP establishes 10 planning districts. The project site is within Planning District 4 (Tenth Avenue Marine Terminal) of the District's certified PMP. The planning district encompasses approximately 371 acres and consists of the following water and land uses: industrial and deep-water berthing, institutional/roadway, marine terminal, maritime services and industrial, and recreation open space. Planning District 4 is the only area in the entire San Diego region with an established waterfront industrial shipping operation. The project site is in the Harbor Drive Industrial Subarea (Subarea 44) of Planning District 4, which is dedicated for shipbuilding and ship repair for the defense and maritime industries. PMP land and water use designations within the project site include Marine Related Industrial and Specialized Berthing, which are described in greater detail below.

3.7.2.1 Existing Port Master Plan Land and Water Use Designations

PMP land and water use designations within the project site include one single landside designation: Marine Related Industrial, and one single waterside designation: Specialized Berthing. The allowable uses for each are described below.

- **Marine Related Industrial** – Landside designation for sites within close proximity to water bodies due to functional dependencies on the industrial activity for direct access or for linkages

to waterborne products, processes, raw materials, or large volumes of water. The primary users of marine-related industrial areas are dependent upon large ships, deep water, and specialized loading and unloading facilities, typically associated with shipbuilding and repair, processing plants, and marine terminal operations.

- **Specialized Berthing** – Waterside designation devoted to marine commercial and industrial uses including ship building and repair, water taxi, excursion and ferry craft, commercial fishing boat berthing as a priority use, cruise ship berthing, maritime museum exhibits and historic craft replicas, water intake and discharge, industrial and commercial launching, vessel loading and unloading, marine contractors, rigged vessels, barges, tugs/tow boats, breakwater, launch ramps and lifts, seawall margin wharves, and any other facility supporting the marine craft engaged in commercial and industrial uses.

In addition to the established land and water use designations, the PMP establishes conceptual plans for each subarea of the Precise Plan. As described under the Harbor Drive Industrial Subarea discussion of the PMP, the subarea consists entirely of one major shipbuilding facility: NASSCO. In terms of employment and economic impact, shipbuilding is one of the most important industries in San Diego County, and the PMP supports its viability. The PMP also supports the concept of a bicycle path, part of the Bayshore Bikeway project, that runs along Harbor Drive; however, the PMP notes that the Bayshore Bikeway design must accommodate the parking needs of NASSCO to the extent possible (District 2020a).

3.7.2.2 Existing Community Characteristics

The existing characteristics of the project site and the surrounding community are described in Chapter 2, *Environmental Setting and Project Description*. For the reader's convenience, this section restates the existing site conditions provided in Chapter 2 as they apply to land use and planning.

Project Site

The project site is within the NASSCO leasehold. Although the NASSCO leasehold encompasses 126 acres of tideland area, project improvements would occur on approximately 2.2 acres of water-side facilities within the leasehold. The project site consists of a floating dry dock, Repair Complex Wharf, revetment along the quay wall, and structural piles associated with berths and piers throughout the NASSCO leasehold. The landside portion of the NASSCO leasehold does not support any native vegetation but does include some trees and other ornamental plantings. Figure 2-2 in Chapter 2, *Environmental Setting*, presents an aerial photograph of the existing conditions on the project site.

Surrounding Community

The project site is within and adjacent to the San Diego Bay in a highly industrialized area of the waterfront. Heavy industry land uses to the northwest of the project site include a ship repair facility operated by BAE Systems, and beyond that by ship engineering services, shipbuilding and repair facilities, and a hydrocolloid manufacturing plant. Military land uses to the east and southeast of the project site include Naval Base San Diego. Land uses north of the project site across Harbor Drive and the railroad ROW include military, light industry, and commercial and office land uses.

Open water of the San Diego Bay is south and west of the project site, with the City of Coronado farther west (approximately 1.4 miles across the Bay from the project site). The nearest residence is

approximately 1,180 feet north of the nearest project site boundary and is separated from the project site by Harbor Drive, railroad ROW, and a recycling center.

3.7.3 Applicable Laws, Regulations, Plans, and Policies

3.7.3.1 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.

3.7.3.2 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 (i.e., the California State Lands Commission [SLC]) for the benefit of all people. All tide and submerged lands, granted or ungranted, as well as navigable rivers, sloughs, etc., are impressed with the Public Trust. The Public Trust Doctrine, as overseen by the SLC, 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. The project site includes land and water subject to the Public Trust Doctrine.

California Coastal Act

The California Coastal Act of 1976 governs land use planning for the entire coastal zone of California. The California Coastal Act includes policies for public access to the coast, recreation, marine environment, land resources, development, and SLR. The CCC enforces the Coastal Zone

Management Act by certifying that a proposed project is consistent with the California Coastal Act. Pursuant to the California Coastal Act and the CCC Sea Level Rise Policy Guidance document (2018), projects in the California Coastal Zone must address SLR and resiliency of the project and coastal resources. The project site is within the California Coastal Zone and is subject to the Coastal Zone Management Act and California Coastal Act.

Sections of the California Coastal Act that area applicable to the project include the following:

- 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 significant. Uses of the marine environment shall be carried out in a 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.
- 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.
- 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.
- 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:

    (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, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that 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.

    (5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

    (6) Restoration purposes.

    (7) Nature study, aquaculture, or similar resource-dependent activities.

    (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.

(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.

(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 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.

- 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.
- 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.
- Section 30250. (a) New residential, commercial, or industrial development, except as otherwise 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.
- 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 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.

  (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.

  (c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.

  (d) Minimize energy consumption and vehicle miles traveled.

- Section 30255. Coastal-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.

- 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:

  (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.

- Section 30708. All port-related developments shall be located, designed, and constructed so as to:

  (a) Minimize substantial adverse environmental impacts.

  (b) Minimize potential traffic conflicts between vessels.

  (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.

  (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.

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 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. 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 PMP is also required by the Port Act, which must specify the land and water uses within the District's jurisdiction.

3.7.3.3 Local

San Diego Unified Port District Port Master Plan

The District PMP is the guiding land use policy document for all areas under the District's jurisdiction. The PMP was developed consistent with the Public Trust Doctrine and in accordance with the provisions of the California Coastal Act. Under the PMP, the District has permitting authority and the ability to issue coastal development permits.

The project site is within Planning District 4 (Tenth Avenue Marine Terminal) of the PMP, which consists of the following water and land uses: industrial and deep-water berthing, institutional/ roadway, marine terminal, maritime services and industrial, and recreation open space. Planning District 4 is the only area in the entire San Diego region with an established waterfront industrial shipping operation. The project site is in the Harbor Drive Industrial Subdistrict of Planning District 4, which is dedicated for shipbuilding and ship repair for the defense and maritime industries. PMP land and water use designations within the project site include Marine Related Industrial and Specialized Berthing, which are described in more detail under Section 3.7.2.1.

Goals in the Port Master Plan that are applicable to the project include the following:

- Goal I: Provide for the present use and enjoyment of the bay and tidelands in such a way as to maintain options and opportunities for future use and enjoyment.
- Goal II: The Port District, as trustee for the people of the State of California, will administer the Tidelands so as to provide the greatest economic, social, and aesthetic benefits to present and future generations.
- Goal III: The Port District will assume leadership and initiative in determining and regulating the use of the bay and tidelands.
    - Encourage industry and employment generating activities which will enhance the diversity and stability of the economic base.
    - Encourage private enterprise to operate those necessary activities with both high and low margins of economic return.

- Goal IV: The Port District, in recognition of the possibility that its actions may inadvertently tend to subsidize or enhance certain other activities, will emphasize the general welfare of statewide considerations over more local ones and public benefits over private ones.
    - Develop the multiple purpose use of the tidelands for the benefit of all the people while giving due consideration to the facts and circumstances related to the development of tideland and port facilities.
    - Foster and encourage the development of commerce, navigation, fisheries, and recreation by the expenditure of public monies for the preservation of lands in their natural state, the reclamation of tidelands, the construction of facilities, and the promotion of its use.
    - Encourage non-exclusory uses on tidelands.
- Goal V: The Port District will take particular interest in and exercise extra caution in those uses or modifications of the Bay and Tidelands, which constitute irreversible action of loss of control.
    - Bay fills, dredging and the granting of long-term leases will be taken only when substantial public benefit is derived.
- Goal VII: The Port District will remain sensitive to needs and cooperate with adjacent communities and other appropriate governmental agencies in Bay and Tideland development.
    - The Port District will attempt to avoid disproportionate impact on adjacent jurisdictions both in benefits and any possible liabilities, which might accrue through bay and tideland activities.
- Goal VIII: The Port District will enhance and maintain the bay and tidelands as an attractive physical and biological entity.
    - Each activity, development and construction should be designed to best facilitate its particular function, which function should be integrated with and related to the site and surroundings of that activity.
    - Views should be enhanced through view corridors, the preservation of panoramas, accentuation of vistas, and shielding of the incongruous and inconsistent.
    - Establish guidelines and standards facilitating the retention and development of an aesthetically pleasing tideland environment free of noxious odors, excessive noise, and hazards to the health and welfare of the people of California.
- Goal X: The quality of water in San Diego Bay will be maintained at such a level as will permit human water contact activities.
    - Insure through lease agreements that Port District tenants do not contribute to water pollution.
    - Cooperate with the Regional Water Quality Control Board, the County Health Department, and other public agencies in a continual program of monitoring water quality and identifying the source of any pollutant.
    - Adopt ordinances and take other legal and remedial action to eliminate sources of pollution.
- Goal XI: The Port will protect, preserve, and enhance natural resources, including natural plant and animal life in the Bay as a desirable amenity, an ecological necessity, and a valuable and usable resource.

- Identify existing and potential assets.
- Keep appraised of the growing body of knowledge on ecological balance and interrelationships.
- Administer the natural resources so that impacts upon natural resource values remain compatible with the preservation requirements of the public trust.

The Port Master Plan specifies that industrial activities on tidelands should meet the following objectives and criteria, which are applicable to the project:

- Be located in convenient proximity to other industrial areas and to living areas from which there are interconnecting transit and thoroughfare routes.
- Provide sites that are economical to develop and adequate for main buildings, accessory storage, off-street loading, off-street parking, and buffer strips.
- Be designed to meet performance standards adequate to avoid nuisances, thereby insuring compatibility with surrounding uses.
- Be limited to industrial uses which have a definite need for the availability of utilities, direct access to railroads and major thoroughfares, and the proximity of either airport or water frontage.
- Provide substantial benefits to both local economic needs and to the regional hinterland.

San Diego Bay Integrated Natural Resources Management Plan

The San Diego Bay Integrated Natural Resources Management Plan (INRMP) is a long-term strategy, sponsored by the U.S. Navy and the District, that is intended to provide direction for the good stewardship of natural resources, while also supporting the ability of the U.S. Navy and District to meet their missions and continue functioning within the San Diego Bay (U.S. Department of the Navy et al. 2013). The stated goal of the INRMP is "to ensure the long-term health, restoration, and protection of San Diego Bay's ecosystem in concert with the bay's economic, Naval, navigational, recreational, and fisheries needs." Table 1-5 of the INRMP summarizes the INRMP objectives. The INRMP objectives that are applicable to the project include the following:

- Objective 4.3.2: Moderately Deep Subtidal Habitat. Conserve and enhance the attributes of moderately deep habitat that support diverse and abundant invertebrate forage for fishes and birds, as well as needed exchanges of energy, materials, and biota among habitats, in balance with the need for shallow and intertidal habitats.
- Objective 4.3.3: Unvegetated Shallow Subtidal Habitat. Conserve and enhance the attributes of unvegetated shallow subtidal sites that sustain a diverse and abundant invertebrate community, fish and wildlife foraging, nursery function for numerous fishes, as well as an ecological role in detritus-based food web support.
- Objective 4.3.7: Artificial Shoreline Structures. Through engineering solutions, minimize the use of shoreline stabilization structures that impact or replace natural intertidal habitats, and maximize the value and function that necessary artificial structures contribute to the bay ecosystem.
- Objective 5.1.2: Sustainable Resource Use and Development. Sustain natural resources and Port and Navy institutional missions into the future without decline to natural resource assets or

compromising the ability to grow those assets, by enabling innovation in planning, design, project management, and implementation.

- Objective 5.2.1: Dredge and Fill Projects. Conduct necessary dredging and dredge disposal in an environmentally and economically sound manner.
- Objective 5.2.2: Ship and Boat Maintenance. Manage the maintenance of boats and ships in San Diego Bay in a manner that achieves significantly improved water and sediment quality, healthier marine organisms, and economic good sense.
- Objective 5.2.3: Shoreline Construction. Seek improved habitat value of developed shorelines and marine structures and their functional contribution to the ecosystem.
- Objective 5.2.4: Water Surface Use and Shoreline Disturbance. Properly balance the various surface uses of the bay as a navigable waterway and associated shorelines with conservation priorities for waterbirds and shorebirds.
- Objective 5.3.2.1: Industrial. Reduce and minimize stormwater pollutants harmful to the bay's ecosystem from entering the bay from watershed users.
- Objective 5.4.1: Remediation of Contaminated Sediments. Ensure that San Diego Bay finfish and shellfish are safe to eat, that the food web is not adversely altered and that risks are minimized to recreational and commercial water contact users from the effects of contaminated sediment.
- Objective 5.4.2: Oil Spill Prevention and Clean Up. Prevent spills of oil and other hazardous substances and ensure the effectiveness of prevention and response planning.
- Objective 5.5: Cumulative Effects**.** Minimize adverse cumulative effects on habitats and species of the bay

San Diego International Airport Land Use Compatibility Plan

The San Diego International Airport (SDIA) 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 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 airspace protection and overflight boundaries beyond Review Area 1. Airspace protection and overflight policies and standards only apply within Review Area 2.

The project site falls within Review Area 2. ALUC review is required for land use plans and regulations within Review Area 2 proposing increases in height limits, and for land use projects that: (1) have received from the Federal Aviation Administration (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 (2) would create any of the following hazards: glare; electromagnetic interference; thermal plumes; lighting, dust, water vapor and smoke; and bird attractants (San Diego County Regional Airport Authority 2014).

Local agencies must submit an application for consistency determination to the ALUC for its review at least 45-60 days prior to construction (San Diego County Regional Airport Authority 2014). The ALUC must respond to a local agency's request for consistency determination within 60 calendar days after the application is deemed complete by ALUC staff. In accordance with FAA Part 77, the FAA would be notified at least 45 to 60 days prior to construction.

3.7.4 Project Impact Analysis

3.7.4.1 Methodology

The following impact analysis evaluates the land use and planning impacts resulting from the proposed project. Based upon the existing conditions described under Section 3.7.2, the impact analysis qualitatively assesses the project-related impacts on the existing community and provides an analysis of whether the project conflicts with existing applicable plans, policies, and regulations. Merely being in conflict with an existing plan, policy, or regulation would not necessarily be considered a significant impact under CEQA; rather, the conflict must result in a substantial adverse effect on the environment.

3.7.4.2 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 land use and planning resulting from the proposed project.

Impacts are considered significant if the proposed project would result in any of the following.

1. Physically divide an established community.
2. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Based on the analysis provided in the Initial Study Environmental Checklist (Appendix C), the project would have no potential to result in a significant impact from physically dividing an established community. Therefore, only Threshold 2 is included in Section 3.7.4.3.

3.7.4.3 Project Impacts and Mitigation Measures

Threshold 2: Would the project conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Impact Discussion

Whether the project conflicts with applicable land use plans, policies, and regulations is discussed in the following sections.

Coastal Zone Management Act, California Coastal Act, Public Trust Doctrine, and San Diego Unified Port District Port Master Plan

The project involves the repair and replacement of a floating dry dock and associated infrastructure to support ongoing operations within the NASSCO leasehold. The project would not require any change to existing Marine Related Industrial and Specialized Berthing designations for the project site. Rather, the project would improve the safety and structural integrity of existing dry dock facilities and associated infrastructure to support the existing water-dependent maritime industrial operations at the project site. These improvements would ensure the continued use of the project site for its designated uses. Nearly all project improvements would be contained within the NASSCO leasehold; however, the installation of the west offshore mooring dolphin and encroachment of Lot 20 beyond the pierhead would occur within CCC jurisdiction and would require approval from the CCC.

However, as discussed above in Section 3.2, *Biological Resources*, Section 3.5, *Hazards and Hazardous Materials* and Section 3.6, *Hydrology and Water Quality*, construction of the proposed project may result in significant impacts on biological resources, contaminated sediment and water quality. Prior to mitigation, these impacts also would be considered a potential conflict with the applicable plans, policies, and regulations discussed in Table 3.7-1, the result of which would be a significant impact on the environment (**Impact-LU-1**). Therefore, to ensure consistency with the CCA and the Port Master Plan, **MM-BIO-1** through **MM-BIO-7** are required to avoid impacts on biological resources, including on special status species, sensitive marine habitat, and from proposed fill. **MM-WQ-1** and **MM-WQ-2** are required to avoid water quality impacts from disturbing contaminated sediments. Similarly, **MM-HAZ-10** is required to ensure contaminated sediments are not released into the water column and spread beyond the current contaminated areas in the project site. Although required by law and not as mitigation measures, compliance with the requirements of the CWA Section 404 permit which must be obtained from the USACE and the CWQ Section 401 water quality certification which must be obtained from the RWQCB, as well as any measures required by the RWQCB pursuant to CAO R9-2012-0024, also would reduce potential impacts. Therefore, after mitigation is incorporated, **Impact-LU-1** would be reduced to less than significant.

The project would ensure continued public and economic benefits through maintaining NASSCO employment opportunities and revenue, as well as national defense services (i.e., ship building and repair services for the U.S. Navy). The project site includes water-dependent maritime industrial operations and is not accessible to the public. The project would not affect coastal access because it would not decrease the availability of existing parking or alter existing designated public views, public

waterfront access, or water-oriented recreational activities. Furthermore, the project would include measures to reduce impacts on biological resources, contaminated sediment and water quality from in-water construction activities and fill (see Section 3.2, *Biological Resources*, Section 3.5, *Hazards and Hazardous Materials* and Section 3.6, *Hydrology and Water Quality*, for more information). Therefore, after mitigation, the project would not conflict with the goals, objectives, and policies outlined in the PMP, which were developed in accordance with the requirements of the Coastal Zone Management Act, California Coastal Act, and Public Trust Doctrine. Table 3.7-1 provides a discussion of the project's consistency with applicable goals, objectives, and policies of the PMP, Coastal Zone Management Act, California Coastal Act, and Public Trust Doctrine.

Table 3.7-1. Project Consistency with Applicable Goals, Objectives, and Policies

Goal, Policy, Objective	Proposed Project Consistency
Port Master Plan – Section II	
Goal I. Provide for the present use and enjoyment of the bay and tidelands in such a way as to maintain options and opportunities for future use and enjoyment.	**Consistent.** The proposed project would address deficiencies related to the age and condition of structures, shoreline sloughing, and operational conditions at the existing dry dock to allow the existing water-dependent maritime industrial shipyard operations at the project site to continue safely, which would ensure the continued use of the site for its designated use.
Goal II. The Port District, as trustee for the people of the State of California, will administer the Tidelands so as to provide the greatest economic, social, and aesthetic benefits to present and future generations.	**Consistent.** The proposed project would allow the NASSCO shipyard, a coastal dependent use, to safely function in support of various shipbuilding and repair operations. This helps to ensure continued economic and social benefits currently produced at the site in the form of jobs, revenue, and national defense.
Goal III. The Port District will assume leadership and initiative in determining and regulating the use of the bay and tidelands. Encourage industry and employment generating activities which will enhance the diversity and stability of the economic base. Encourage private enterprise to operate those necessary activities with both high and low margins of economic return.	**Consistent.** The proposed project would continue the shipbuilding and ship repair uses that currently exist at the site, but would improve safety of operations for a company that provides diverse employment opportunities in the form of manufacturing/maintenance positions (mechanics, electricians, welders, etc.), engineering jobs, business and strategy planning positions as well as other office-related jobs such as accounting and finance opportunities, and many other specializations. Therefore, the project would encourage and make safer a stable private industry that provides employment generating activities.
Goal IV. The Port District, in recognition of the possibility that its actions may inadvertently tend to subsidize or enhance certain other activities, will emphasize the general welfare of statewide considerations over more local ones and public benefits over private ones. Develop the multiple purpose use of the tidelands for the benefit of all the people while giving due consideration to the facts and circumstances related to the development of tideland and port facilities.	**Consistent.** The proposed project would improve the safety of the existing operations at the project site, which includes water-dependent maritime industrial uses and, as such, promotes the multi-purpose uses of the tidelands and Port facilities. While the project site does not allow public access due to safety and security reasons, it does provide public benefit in the form of economic considerations (jobs, local revenue, etc.) and national defense (by providing ship repair services to the Navy). The project does not involve the use of public monies and would not involve an

Goal, Policy, Objective	Proposed Project Consistency
Foster and encourage the development of commerce, navigation, fisheries, and recreation by the expenditure of public monies for the preservation of lands in their natural state, the reclamation of tidelands, the construction of facilities, and the promotion of its use. Encourage non-exclusory uses on tidelands.	exclusory use of the tidelands (i.e., the project involves restrictions to the bayfront for the purposes of safety and security and not for the purposes of promoting private enjoyment of the waterfront over public enjoyment of the waterfront).
Goal V. The Port District will take particular interest in and exercise extra caution in those uses or modifications of the Bay and Tidelands, which constitute irreversible action or loss of control. Bay fills, dredging and the granting of long-term leases will be taken only when substantial public benefit is derived.	**Consistent.** The project does not propose any dredging within San Diego Bay although the RWQCB could require additional remediation activities as a condition of approval of the CWQ Section 401 water quality certification or pursuant to RWQCB Cleanup and Abatement Order (CAO) R9-2012-0024. Any such remediation activities, which could include dredging, would be required to comply with the Final EIR for the Shipyard Sediment Remediation Project (2011) (SCH#2009111098) and the associated Mitigation Monitoring and Reporting Program (MMRP) which provided CEQA compliance for the remediation of existing contaminated sediment within the north and south (i.e., NASSCO site) shipyards. **MM-HAZ-10** also addresses the potential for post-construction remediation activities. While the proposed project includes the replacement and/or repair of the existing floating dry dock, Repair Complex Wharf, quay wall and revetments, and structural piles, all of which would occur in-water and/or overwater and would produce fill in the form of additional support piles, and additional backfill in the case of the Repair Complex Wharf to extend the overwater pier, mitigation measures have been identified to reduce any potentially significant impacts to a less-than-significant level, including impacts related to biological resources and water quality (see **MM-WQ-1** and **MM-WQ-2** described in Section 3.6, *Hydrology and Water Quality*; and **MM-BIO-4** through **MM-BIO-7** described in Section 3.2, *Biological Resources*). Additionally, as noted above, NASSCO provides many employment opportunities in the San Diego area. The proposed project would improve the safety of existing shipbuilding and ship repair operations at the project site, which would allow NASSCO to continue to provide public benefit in the form of economic considerations (jobs, local revenue, etc.) and national defense (by providing ship repair services to the Navy). As such, although the project involves in-water and/or overwater work, the project would result in substantial public benefit and would be consistent with this goal.
Goal VI. The Port District will integrate the tidelands into a functional regional transportation network.	**Not applicable.** The project would improve the safety of existing shipbuilding and ship repair operations at the project site by replacing and/or repairing the existing floating dry dock, Repair

Goal, Policy, Objective	Proposed Project Consistency
Encouraging development of improved major rail, water and air systems linking the San Diego region with the rest of the nation. Improved automobile linkages, parking programs and facilities, so as to minimize the use of waterfront for parking purposes. Providing pedestrian linkages. Encouraging development of non-automobile linkage systems to bridge the gap between pedestrian and major mass systems.	Complex Wharf, quay wall/revetments, and structural piles within the project site. The operational phase of the project would not involve any changes to landside or waterside transportation networks at the site or within the surrounding area and does not involve adjustments to the availability of parking at the project site.
Goal VII. The Port District will remain sensitive to needs and cooperate with adjacent communities and other appropriate governmental agencies in Bay and Tideland development. The Port District will attempt to avoid disproportionate impact on adjacent jurisdictions both in benefits and any possible liabilities, which might accrue through bay and tideland activities.	**Consistent.** The project does not propose any change in the existing operations at the site and thus will not result in a disproportionate impact on adjacent communities. In addition, the District's tenant will coordinate with adjacent communities and agencies with jurisdiction over environmental resources within the project vicinity that would be affected by the proposed project as necessary to eliminate or reduce environmental impacts on those communities and resources. As it relates to other resources (e.g., social and economic benefits), in making its decision whether to approve the proposed project, the Board of Port Commissioners will exercise its discretion so as to provide the greatest economic and social benefits to present and future generations.
Goal VIII. The Port District will enhance and maintain the bay and tidelands as an attractive physical and biological entity. Each activity, development and construction should be designed to best facilitate its particular function, which function should be integrated with and related to the site and surroundings of that activity. Views should be enhanced through view corridors, the preservation of panoramas, accentuation of vistas, and shielding of the incongruous and inconsistent. Establish guidelines and standards facilitating the retention and development of an aesthetically pleasing tideland environment free of noxious odors, excessive noise, and hazards to the health and welfare of the people of California. Establish and foster an artworks program to promote, enhance, and enliven the waterfront experience through the public and private placement of works of art.	**Consistent.** The project would provide improvements and upgrades to existing facilities to better facilitate the function of the site, which operates ship repair services for the U.S. Navy and commercial customers. This use is related to the surrounding uses, which include other maritime industrial uses as well as a U.S. Naval base. The project site is not designated nor appropriate for providing public views or as a location for the placement of works of art. In addition, the emission of noxious odors, production of excessive noise, and other hazards are regulated by existing laws and regulations to minimize and avoid effects on the health and welfare of the people of California.
Goal IX. The Port District will insure physical access to the bay except as necessary to provide for the safety and security, or to avoid interference with waterfront activities.	**Consistent.** The proposed project would not involve public access to the waterfront or provide "windows to the water" because the project area is highly industrialized, and doing so would interfere with the safety and security of the public and users of the site.

Goal, Policy, Objective	Proposed Project Consistency
Provide "windows to the water" at frequent and convenient locations around the entire periphery of the bay with public right-of-way, automobile parking and other appropriate facilities. Provide access along the waterfront wherever possible with promenades and paths where appropriate, and elimination of unnecessary barricades which extend into the water.	
Goal X. The quality of water in San Diego Bay will be maintained at such a level as will permit human water contact activities. Maintain a program of flotsam and debris cleanup. Insure through lease agreements that Port District tenants do not contribute to water pollution. Cooperate with the Regional Water Quality Control Board, the County Health Department, and other public agencies in a continual program of monitoring water quality and identifying the source of any pollutant. Adopt ordinances and take other legal and remedial action to eliminate sources of pollution.	**Consistent.** The proposed project would involve in-water construction activities and disturbance to the Bay floor, which could increase the opportunity for debris or pollutants to enter into the Bay. However, the proposed project is subject to the regulatory jurisdiction and oversight of the USACE and the RWQCB and will be required to obtain a CWA Section 404 permit and a Rivers and Harbors Act Section 10 permit from the USACE and a CWA Section 401 water quality certification from the RWQCB. In addition to complying with all conditions of approval imposed by the USACE and the RWQCB in the Section 404 and Section 10 permits and Section 401 water quality certification, the proposed project would be required to implement mitigation measures to ensure that project-related impacts on water quality would be less than significant. These measures include **MM-WQ-1** and **MM-WQ-2** described in Section 3.6, *Hydrology and Water Quality*; **MM-BIO-4** described in Section 3.2, *Biological Resources*; and **MM-HAZ-1 through MM-HAZ-10** described in Section 3.5, *Hazards and Hazardous Materials*. In addition, existing operational activities involve shipbuilding and ship repair and have the potential to release pollutants, including cleaning agents, solvents, paint, etc., into the Bay. NASSCO operates under an individual NPDES Permit (Order R9-2016-0116), maintains a facility BMP Plan Manual, and has a fully contained stormwater diversion system that prevents stormwater from discharging to receiving waters. As part of Order R9-2016-0116, the project site is subject to an operational SWPPP designed to reduce or prevent the discharge of pollutants from industrial activities. In addition, the District would require NASSCO to comply with the District's Harbor Safety Plan, which provides mariners with the District's policies regarding pollution prevention and protection of the region's resources. These measures would ensure that the water quality of the Bay would be protected during project construction and operation (see Section 3.6, *Hydrology and Water Quality*).
Goal XI. The Port will protect, preserve, and enhance natural resources, including natural plant and animal life in the Bay as a desirable amenity,	**Consistent.** As detailed in Section 3.2, *Biological Resources*, the proposed project would be required to implement mitigation measures **MM-BIO-1** through

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an ecological necessity, and a valuable and usable resource. Promote and advance public knowledge of natural resources through environmental educational materials. Identify existing and potential assets. Keep appraised of the growing body of knowledge on ecological balance and interrelationships. Encourage research, pilot programs, and development in aquaculture as long as it is consistent with this goal. Administer the natural resources so that impacts upon natural resource values remain compatible with the preservation requirements of the public trust.	**MM-BIO-7**, which include implementation of construction measures to protect California least tern, California brown pelican, and other sensitive marine-dependent avian species; implementation of a monitoring program during pile driving to avoid or protect green sea turtles, marine mammals, and fishes; implementation of construction measures to protect eelgrass and eelgrass mitigation and monitoring in compliance with the California Eelgrass Mitigation Policy; and implementation of overwater coverage mitigation to compensate for loss of open water habitat. As a result, the proposed project would not conflict with the protection of any natural plant and animal life in the Bay.
Port Master Plan – Section III (Industrial Land Use Objectives and Criteria)	
Industrial activities on tidelands should: Be located in convenient proximity to other industrial areas and to living areas from which there are interconnecting transit and thoroughfare routes.	**Consistent.** The proposed project is within an existing industrial portion of the bayfront and has access to East Harbor Drive and I-5, which provide access to adjoining industrial areas and local and regional residential communities. In addition, the project site is within walking distance of bus and trolley routes.
Provide, under single ownership, a variety of reasonably level, well-drained sites on land that is either vacant or on developed lands that can be phased out economically for redevelopment.	**Not applicable.** The project would not involve acquisition or consolidation of parcels for the purposes of redevelopment.
Provide sites that are economical to develop and adequate for main buildings, accessory storage, off-street loading, off-street parking, and buffer strips.	**Consistent.** The project would involve improvements to and reconstruction of the existing facilities within a site that is adequate in size to accommodate the shipbuilding and ship repair services provided by NASSCO.
Be designed to meet performance standards adequate to avoid nuisances, thereby insuring compatibility with surrounding uses.	**Consistent.** The project includes performance standards for water quality, noise, and air quality that would ensure the project avoids nuisances and insures compatibility with the surrounding uses.
Be limited to industrial uses which have a definite need for the availability of utilities, direct access to railroads and major thoroughfares, and the proximity of either airport or water frontage.	**Consistent.** The project site is currently used for, and would continue to operate, shipbuilding and ship repair services. As such, the project site accommodates a use that requires direct access to water frontage.
Provide substantial benefits to both local economic needs and to the regional hinterland.	**Consistent.** The project contributes to the local economy by operating the shipbuilding and ship repair division of a major company, and thus provides jobs and revenue at the local and regional levels. In addition, as noted above, part of the purpose of the project is to improve the safety of operations at the project site by addressing deficiencies related to the age and condition of structures, shoreline sloughing, and operational conditions at the existing dry dock. These

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	improvements would allow NASSCO to continue its existing shipbuilding and ship repair operations, thereby continuing to provide employment opportunities and substantial benefits to local and regional economic needs.
Marine Related Industry Designation	**Consistent.** This designation stipulates uses that require proximity to water bodies. The project involves a ship building and repair service, which meets that requirement and is a permitted use under the Marine Related Industry designation.
California Coastal Act	
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.	**Not applicable.** The project site and surrounding area are predominantly occupied by heavy industrial and military uses. Due to public safety and security concerns, the project site is not an appropriate location to provide publicly accessible waterfront access.
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.	**Not applicable.** The project site and surrounding area are predominantly occupied by heavy industrial and military uses. Due to public safety and security concerns, the project site is not an appropriate location to provide publicly accessible waterfront access.
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, [or] (2) Adequate access exists nearby.	**Consistent.** The proposed project does not provide public access to the coast because it is inconsistent with public safety and military security needs. In addition, adequate access exists at Cesar Chavez Park, approximately 0.6-mile to the northwest. The proposed project would not inhibit public access to this park.
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.	**Not applicable.** The proposed project would not increase the number of employees or laborers at the project site during operations. Additionally, the proposed project does not involve any changes to the existing parking facilities at the NASSCO shipyard. As such, the proposed project would not increase the demand for parking or parking supply at the project site or in the surrounding area.
Section 30213. Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. 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	**Not applicable.** The project site is occupied by a marine industrial use and is not a feasible location for lower cost visitor or recreational facilities and does not involve the construction of these facilities.

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identification of low or moderate income persons for the purpose of determining eligibility for overnight room rentals in any such facilities.	
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: Topographic and geologic site characteristics. The capacity of the site to sustain use and at what level of intensity. 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. 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.	**Not applicable.** As noted above, due to safety and security concerns associated with the onsite shipbuilding and ship repair services, the project site is not an appropriate location to provide public access to the waterfront.
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.	**Not applicable.** Due to the industrialized nature of the project site and surrounding area, the project site is not suitable for water-oriented recreational activities.
Section 30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.	**Not applicable.** Due to the industrialized nature of the project site and surrounding area, the project site is not suitable for water-oriented recreational activities.
Section 30224. Increased recreational boating use of coastal waters shall be encourage, 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 harboring refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.	**Not applicable.** Due to the industrialized nature of the project site and surrounding area, the project site is not suitable for water-oriented recreational activities.
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 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	**Consistent.** The proposed project would involve construction activities, including pile driving, in an area potentially containing green sea turtles, marine mammals, and eelgrass, as well as foraging areas for California least tern, California brown pelican, and other marine-dependent birds. However, mitigation measures **MM-BIO-1** through **MM-BIO-5** would be implemented to ensure that in-water work would not adversely affect the marine environment and these resources (see Section 3.2, *Biological Resources*).

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commercial, recreational, scientific, and educational purposes.	
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.	**Consistent.** The proposed project would not involve development adjacent to natural streams or riparian habitat. However, the proposed project would involve development within coastal waters and would implement mitigation measures (**MM-WQ-1** and **MM-WQ-2**) and BMPs to prevent in-water construction activities from adversely affecting the water quality of the Bay (see Section 3.6, *Hydrology and Water Quality*). In addition, the NASSCO shipyard currently operates a Storm Water Diversion System to eliminate or reduce stormwater discharge from the site into the Bay. This system would continue to operate under project conditions. In addition, while the proposed project would involve development within areas that have the potential to disturb green sea turtles and marine mammals as well as foraging opportunities for California least tern and California brown pelicans, mitigation measures **MM-BIO-1** through **MM-BIO-7** are required to ensure that in-water activities would not adversely affect the marine environment (see Section 3.2, *Biological Resources*).
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.	**Consistent.** Construction activities associated with the proposed project could involve some use of hazardous materials (e.g., petroleum products). As discussed in Section 3.5, *Hazards and Hazardous Materials*, the Resource Conservation and Recovery Act; Hazardous and Solid Waste Act; US DOT Hazardous Materials Regulations; California Code of Regulations Titles 8 and 22; California Hazardous Waste Control Act; California Health and Safety Code; and San Diego County Code, Title 6, Division 8 would govern proper containment, spill control, and disposal of hazardous waste generated during demolition and construction. Implementing inventory accountability, spill prevention controls, and waste disposal controls associated with these regulations would limit both the frequency and severity of potential hazardous materials releases during demolition and construction.
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:	**Consistent.** The project does not propose any diking or dredging of open coastal waters, wetlands, estuaries, and lakes. However, further remediation for existing and known contaminated sediments may be required for disturbance of sediments that were not previously dredged under CAO R9-2012-0024 due to intervening structures. Therefore, if the project replaces the dry dock's Approach Pier, as proposed, and removes the piles and overwater structure at the Repair Complex Wharf, also as proposed, new access to areas previously undredged

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(l) 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, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that 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. (5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas. (6) Restoration purposes. (7) Nature study, aquaculture, or similar resource dependent activities.	during the remediation activities associated with the CAO could now be dredged. Any such remediation activities, which are determined by the RWQCB to be covered under the CAO, would be required to comply with the CAO's Final EIR for the Shipyard Sediment Remediation Project and the associated MMRP. As determined in that Final EIR, with the implementation of associated MMRP, the environmental impacts associated with remediation of contaminated sediments on water quality and related to hazardous materials would be less than significant. Additionally, the proposed project would result in fill in bay waters in the form of piles to support structures and mooring dolphins and backfill at the Repair Complex Wharf to expand the wharf. Although the proposed project includes piles within the Bay, the proposed project would result in a net increase in fill from backfilling a proposed sheet pile wall (i.e., bulkhead) under the existing Repair Wharf Complex and the net increase in fill associated with piles. Mitigation measures have been identified to minimize the adverse environmental effects related to fill as well as shading of open water. Specifically **MM-BIO-5** is required to ensure there is no net loss of open water (which serves as foraging habitat for sensitive avian species), **MM-BIO-6** is required to ensure there is no net loss of sensitive marine habitat, **MM-BIO-7** is required to ensure there is no net loss of bay waters due to fill, **MM-WQ-1** is required to ensure turbidity is minimized during pile removal and installation, and **MM-WQ-2** is required to avoid reintroducing existing contaminated sediment into the water column that could potentially occur from proposed in-water work. Additionally, the project would require a Coastal Development Permit, which would be conditioned to ensure compliance with the Coastal Act. Finally, the proposed activities associated with project construction would be subject to approval by the USACE under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, and the RWQCB under Section 401 of the Clean Water Act. Additional water quality measures may be required as conditions of approval of the USACE Section 404 and Section 10 permits and the RWQCB Section 401 water quality certification. With implementation of the mitigation measures within this EIR and mandatory regulatory compliance (e.g., USACE review and approval under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act, and RWQCB review and approval under Section 401 of the CWA), any adverse environmental effects

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	associated with fill from piles and backfill of the area underneath the Repair Complex Wharf, or potential dredging from any remediation activities needed to comply with the RWQCB would be reduced to less than significant. In light of the location of the project and the nature of the proposed construction activities, there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided and regulatory permit conditions will be imposed to minimize adverse environmental effects.
(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.	**Consistent.** The proposed project does not propose any dredging activities or spoil disposal. However, dredging may be a required remediation activity given the project's location within the Shipyard Sediment Site identified in CAO R9-2012-0024, specifically where areas previously inaccessible would be made accessible from the removal of intervening structures. Therefore, any remediation activities, which may potentially include dredging, would be subject to the regulatory jurisdiction of the RWQCB and may be required to comply with CAO R9-2012-0024 and mitigation measures identified in the certified Final EIR for the Shipyard Sediment Remediation Project and the associated MMRP which provided CEQA compliance for the ongoing CAO at the north and south (i.e., NASSCO site) shipyards. As such, the project would avoid significant disruption to marine and wildlife habitats and water quality. Moreover, should dredging occur, it is not anticipated that dredge spoils would be suitable for beach replenishment due to contamination.
(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. 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.	**Consistent.** While the proposed project would involve construction activities within already developed parts of the Bay, it is not located within south San Diego Bay, which the District defines as the area generally south of the National City Bayfront. The project would not involve development in Bodega Bay or within a wetland or estuary.

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(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 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.	**Not applicable.** The proposed project does not involve development on a watercourse and would not be required to implement erosion control or flood control facilities on a watercourse.
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.	**Consistent.** There are no commercial fishing operations in the project vicinity, and the proposed project would not affect these operations. In addition, the proposed project would not reduce space for recreational boating or commercial fishing operations.
Section 30234.5. The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.	**Not applicable.** The project site currently does not support commercial or recreational fishing activities, and the project would not involve the addition of commercial or recreational fishing facilities to the project site. In addition, there are no commercial fishing operations in the project vicinity, and the proposed project would have no effect on commercial or recreational fishing operations located elsewhere in the San Diego Bay.
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.	**Consistent.** The proposed project would include repairs to the quay wall and supporting revetments in front of the quay wall at several areas, including Lot 20 to Pier 12, floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base Quay Wall. These improvements would support a coastal-dependent use and would not affect or alter an existing natural shoreline. In addition, neither the existing nor proposed marine structures at the project site cause water stagnation that contributes to pollution or fishkills.
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	**Consistent.** As discussed in Section 3.2, *Biological Resources*, the project would involve in-water work within areas containing, or close to, eelgrass and open water habitats. Mitigation measures **MM-BIO-5**

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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.	and **MM-BIO-6** would be required to ensure no net loss of environmentally sensitive habitat or substantial degradation of environmentally sensitive habitat areas.
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.	**Consistent.** As discussed in Section 3.4, *Geology and Soils*, and Section 5.3.4, *Cultural Resources*, the project would have no impact on paleontological and/or archaeological resources.
Section 30250. (a) New residential, commercial, or industrial development, except as otherwise 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.	**Consistent.** The proposed project would not involve the construction of a new industrial development but would involve improvements to an existing industrial use that is adjacent and contiguous to an existing urbanized and developed area. The proposed project is also consistent with existing developments and land uses, as discussed within this section. The project site is adequately served by existing public services (see Section 5.3.12, *Public Services*). The proposed project would not involve the division of land.
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.	**Consistent.** As discussed in Section 5.3.1, *Aesthetics*, the proposed project would result in less-than-significant impacts on the scenic and visual qualities of the site and surrounding area.
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 (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads	**Not applicable.** The proposed project would not involve new development and, due to public safety and security concerns, does not involve public access to the coast.

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(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 (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.	
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.	**Consistent.** The proposed project involves the maintenance, repair, and replacement of existing waterfront infrastructure at an existing shipbuilding and ship repair yard and would not involve new development. Also, the proposed project would not increase risks to life and property due to geologic, flood, or fire hazards (see Section 3.4, *Geology and Soils,* Section 3.5, *Hazards and Hazardous Materials*, Section 3.6*, Hydrology and Water Quality,* and Section 5.3, *Effects Not Found to be Significant*).
(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.	**Consistent.** The project site is located along a human-made shoreline and is not located along a bluff or cliff; no natural landforms would be altered by the proposed project.
(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.	**Consistent.** As analyzed in Section 3.1, *Air Quality and Health Risk*, the project would be consistent with the regional air quality strategy and the state implementation plan.
(d) Minimize energy consumption and vehicle miles traveled.	**Consistent.** The proposed project would shorten the time needed to reposition the floating dry dock when moving out of the line of the Ways and Building dock during vessel releases into the water, such that energy consumption associated with tug hours would be reduced during operations when compared to existing conditions. In addition, the diesel generators on the new floating dry dock would be U.S. EPA Tier 4-rated and would be outfitted with a closed-loop cooling water system. These new engines would improve energy efficiency when compared with existing Tier 0 diesel engines. Moreover, the new floating dry dock would be outfitted with an extensive electrical distribution system, as well as a modern electric saltwater pumping system to minimize the need for portable diesel saltwater

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	pumps, which would further improve energy efficiency. Lastly, the new Repair Complex Wharf would create a centralized laydown area that would reduce the distance of forklift trips, and associated energy consumption, throughout the shipyard when compared with existing conditions. As noted above, the proposed project would not involve any increase in operational capacity nor would it result in any impacts related to vehicle miles traveled (see Section 3.9, *Transportation*).
Section 30255. Coastal 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.	**Consistent.** The proposed project would include maintenance, repair, and replacement of facilities that support the existing shipbuilding and ship repair yard, which provides vessel repair services for naval and commercial customers. As such, the proposed project involves continuation of a coastal dependent use. Furthermore, the project would not involve development in a wetland.
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.	**Consistent.** The proposed project would not result in the loss or elimination of commercial fishing harbor space and would not interfere with any existing commercial fishing operations.
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. (d) For water areas to be diked, filled, or dredged, the commission shall balance and consider socioeconomic and environmental factors.	**Consistent.** The proposed project involves the repair and maintenance of an existing marine industrial coastal dependent use. Although the proposed project does not propose any dredging within San Diego Bay, dredging may be required by the RWQCB at the project site. Because the project would potentially open up areas previously inaccessible to remedial dredging during initial dredging operations associated with the CAO, the RWQCB may determine that dredging of these areas is appropriate. Therefore, any such remediation actions would be within the jurisdiction of the RWQCB and would be conducted in compliance with the regulatory and permitting requirements determined by the RWQCB to be applicable, which may include the CWQ Section 401 water quality certification, the CAO and the certified Final EIR for the Shipyard Sediment Remediation Project and the associated MMRP. Additionally, the proposed project would not result in any land or water use changes, and no elements of the project would require an amendment to the PMP. In making its decision whether to approve the proposed project, the Board of Port Commissioners

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	will consider the economic, financial, and related policy concerns of this objective and will exercise its discretion based on available evidence.
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: (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.	**Consistent.** The project does not propose to discharge any fill materials. The only fill that would be created would be from support piles and reconstruction of the quay wall/revetments currently in disrepair. In addition, BMPs and mitigation measures (**MM-BIO-1** through **MM-BIO-7** and **MM-WQ-1** and **MM-WQ-2**) will be implemented to ensure the proposed project does not adversely affect open water habitat function, water quality, wildlife resources, or water circulation (see Sections 3.2, *Biological Resources*, and 3.6, *Hydrology and Water Quality*).
Section 30708. All port-related developments shall be located, designed, and constructed so as to: Minimize substantial adverse environmental impacts.	**Consistent.** As documented throughout this EIR, the proposed project would minimize substantial adverse environmental impacts to the extent feasible and no significant and unavoidable impacts would occur.
Minimize potential traffic conflicts between vessels.	**Consistent.** The proposed project would include maintenance, repair, and replacement of existing facilities at a shipbuilding and ship repair yard in order to improve the safety of operations but would not result in an increase in operations at the site. As such, the project would result in a temporary and minor increase in vessel traffic during construction activities (for pile driving barges or delivery of some construction materials) but would not increase waterside vessel traffic during operations. This minor temporary increase in vessels would not add a substantial number of new users to the San Diego Bay. In addition, boaters traveling to and from the project site would stay within the navigational channels designated by the District and US Coast Guard and would adhere to the provisions of the Harbor Safety Plan.
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.	**Consistent.** The proposed project would involve improvements to an existing marine industrial use that provides shipbuilding and repair services that support District purposes, including naval and commercial shipping uses.
Provide for other beneficial uses consistent with the public trust, including, but not limited to,	**Not applicable.** The proposed project involves maintenance, repair, and replacement of facilities

Goal, Policy, Objective	Proposed Project Consistency
recreation and wildlife habitat uses, to the extent feasible.	necessary to the shipbuilding and ship repair services provided at the project site and is not appropriate for recreation or wildlife habitat uses.

California Coastal Commission Sea Level Rise Policy Guidance

As discussed in Section 3.6, *Hydrology and Water Quality*, a SLR vulnerability assessment was completed for the Tenth Avenue Marine Terminal Planning District (San Diego Unified Port District 2019). Based on the assessment, this planning district is projected to withstand potential SLR inundation and temporary flooding from SLR during a 100-year storm event at 1.6 feet of projected SLR (anticipated in the year 2050). The higher elevation and existing shoreline armoring are expected to protect many of the land uses in the panning district from substantial projected SLR impacts. However, the coastal dependent uses in the planning district are sensitive to potential inundation. Several project components, including areas where quay wall revetment and pile repairs or replacement would occur, may be affected by mean SLR during the useful design life (i.e., 30 years) of the various project elements. However, these project elements are intended to protect the shoreline and improve SLR resiliency through addressing existing revetment failures and structural pile deficiencies. In addition, these project elements would not substantially increase in-water fill volumes and, therefore, would not have potential to impede or redirect flood flows. Furthermore, this type of inundation would occur with or without the proposed project. Consequently, the project is not anticipated to exacerbate existing or projected damage to the environment due to SLR. Table 3.7-2 includes a discussion of the project's consistency with the CCC's Sea Level Rise Policy Guidance (2018). As indicated, the project would be consistent with the guidance.

Table 3.7-2 California Coastal Commission Sea Level Rise Policy Guidance (2018)

Steps for Addressing Sea Level Rise	Project Discussion
1. Establish the projected sea level rise (SLR) range for the proposed project	The expected project life is anticipated to be 30 years. Construction of the various project components would be completed in 2023 to 2034. Therefore, the range of SLR projections applicable to the project would be 2050 to 2070. Because the project components include in-water structures to support maritime infrastructure, the extreme risk aversion scenario was used. Under this scenario, the projected SLR at the project site is anticipated to be 2.7 to 5.2 feet.
2. Determine how SLR impacts may constrain the project site	Impacts associated with SLR generally include erosion, inundation, flooding, wave impacts, and saltwater intrusion. The project site would be susceptible to inundation and storm surge under the scenarios described in Step 1 above. However, the various project components that would be constructed or repaired include in-water structures that are already exposed to these hazards. The project would not exacerbate projected damage due to SLR; rather, the project includes improvements to reinforce the existing shoreline through (1) installation of a sheet-piled bulkhead at the proposed Repair Complex Wharf; (2) repairs to revetment showing signs of wear, fracture, and collapse; and (3) repairs to existing structural piles or in-kind replacement of structural piles showing deterioration, cracking, corrosion, and wear. These project components are intended to improve resiliency to SLR within the project site.
3. Determine how the project may impact coastal	The project site is developed with marine-related, water-dependent industrial uses. The project involves the repair and maintenance of existing facilities and does not propose any change in existing operations at the project site. The

Steps for Addressing Sea Level Rise	Project Discussion
resources over time, considering SLR	project site lacks many coastal resources, including public access and recreation, agricultural resources, natural landforms, scenic resources, and archaeological and paleontological resources. However, the project site includes water quality and natural resources. As discussed in Sections 3.2, *Biological Resources*, and Section 3.6, *Hydrology and Water Quality*, the project would include measures to reduce impacts on these resources. The project would not exacerbate the potential for impacts on water quality and natural resources from projected SLR. The project includes improvements to existing infrastructure and any potential impacts from SLR would occur even if the project was not implemented.
4. Identify project alternatives to both avoid resource impacts and minimize risks to the project	Implementation of the project would not exacerbate existing or projected damage to the environment, including damage to existing structures and sensitive resources, due to projected SLR. Project alternatives to avoid resource impacts and minimize SLR risks to the project are not required.
5. Finalize project design and submit permit application	As a standard practice, this step will be completed after the CEQA process is complete.

SLR = Sea Level Rise

Source: California Coastal Commission 2018

San Diego International Airport Land Use Compatibility Plan

In accordance with Federal Aviation Regulations, Part 77, the FAA would be notified at least 45 days prior to construction because project construction would introduce temporary objects (e.g., construction equipment, drilling rigs, and lights) in proximity to the airport. The proposed project is required to obtain all necessary FAA determinations prior to construction, and comply with any conditions provided in the determination, if any. Furthermore, the project would not result in any changes in existing land uses and does not propose increases in height limits for any existing structures. Therefore, the project would be consistent with the ALUCP and would not pose an obstruction or hazard to air navigation.

Natural Resources Management Plans

There are no habitat conservation plans or natural community conservation plans that apply to the project site. However, the project site is within the area covered by the San Diego Integrated Natural Resources Management Plan discussed above in Section 3.7.3.3. Prior to mitigation, the potential significant impacts of the proposed project on biological resources, contaminated sediment and water quality could be considered to conflict with applicable provisions of the San Diego Bay INRMP and have a significant impact on land use and planning (**Impact-LU-1**). Therefore, to ensure consistency with the San Diego Bay INRMP, **MM-BIO-1** through **MM-BIO-7** are required to avoid impacts on biological resources, including on special status species, sensitive marine habitat, and from proposed fill. **MM-WQ-1** and **MM-WQ-2** are required to avoid water quality impacts from disturbing sediments. Similarly, **MM-HAZ-10** is required to ensure contaminated sediments are not released into the water column and spread beyond the current contaminated areas in the project site. Although required by law and not as mitigation measures, compliance with the requirements of the CWA Section 404 permit and the Rivers and Harbors Act Section 10 permit, which must be obtained from the USACE, and the CWQ Section 401 water quality certification which must be

obtained from the RWQCB, also would reduce potential impacts. Therefore, after mitigation is incorporated, **Impact-LU-1** would be reduced to less than significant.

As discussed in Section 3.2, *Biological Resources*, the project would include mitigation measures to reduce impacts on marine habitats and species during construction activities and ensure consistency with the San Diego Bay INRMP. Implementation of **MM-BIO-5, MM-BIO-6, MM-BIO-7** as well as **MM-WQ-1 and MM-WQ-2** would ensure alignment with the many objectives that promote sustainable natural resources and any adverse effects from in-water construction and fill, as well as minimization of any impacts related to marine water quality. In addition, as discussed in Section 3.6, *Hydrology and Water Quality*, the project would include BMPs to protect water quality during construction activities, in compliance with NASSCO's individual NPDES permit requirements. Furthermore, NASSCO would be required to maintain all existing operational and maintenance BMPs, including a fully contained stormwater diversion system where discharging to the receiving water does not occur. In addition, as discussed in Section 3.5, *Hazards and Hazardous Materials*, **MM-HAZ-1** through **MM-HAZ-9** require several BMPs for handling hazardous substances and implementation of **MM-HAZ-10** would ensure that impacts associated with the disturbance of contaminated sediments would be reduced to less than significant. Because the project includes measures to reduce impacts on the San Diego Bay's natural resources and would enable NASSCO to safely continue shipbuilding and repair operations, the project would be consistent with the goal and objectives of the San Diego Bay INRMP, as summarized in Section 3.7.3 and within Table 3.7-3, which includes a discussion of the project's consistency with applicable objectives of the INRMP. Therefore, with the implementation of the mitigation measures listed in Section 3.2, including **MM-BIO-5, MM-BIO-6, and MM-BIO-7**, as well as within Section 3.6, which includes **MM-WQ-1 and MM-WQ-2**, and **MM-HAZ 1** through **MM-HAZ-10** in Section 3.5, the project would not conflict with natural resources management plans.

Table 3.7-3 San Diego Bay Integrated Natural Resources Management Plan Conflict Analysis

Topic Area	Objective	Conflict Analysis
Ecosystem approach	4.1 Protect bay natural resources and their function by planning and acting at ecologically meaningful, hierarchical scales and time frames.	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. No additional mitigation is required to avoid a conflict with this objective.
Mitigation and enhancement	4.2 Improve the success of mitigation and enhancement projects based on regulatory (avoidance and minimization measures), functional, and ecosystem criteria.	**Consistent.** This objective applies to the project because the proposed project would result in the loss of marine habitats, including unvegetated and some limited vegetated shallow subtidal and intertidal habitat, without mitigation. Mitigation measures **MM-BIO-5, MM-BIO-6,** and **MM-BIO-7** would ensure no net loss of intertidal or shallow subtidal habitats, including eelgrass habitat. No additional mitigation is required to avoid a conflict with this objective.
Protected sites	4.2.1 Ensure effective protection of a minimum quantity and quality of the remaining marine and coastal habitat in San	**Consistent.** The proposed project site is not within a protected habitat area within the bay and is within the NASSCO shipyard. However, unvegetated and some limited vegetated shallow subtidal and intertidal habitats are present and may be adversely affected by the

Topic Area	Objective	Conflict Analysis
	Diego Bay, targeting a mix of habitat types that maximizes ecosystem function and carrying capacity.	proposed project. Any loss would be mitigated by **MM-BIO-5**, **MM-BIO-6**, and **MM-BIO-7** to ensure that no net loss of these habitats would occur. No additional mitigation is required to avoid a conflict with this objective.
Deep subtidal	4.3.1 Retain sufficient deep subtidal habitat to support safe navigation, good water quality, and physical and biological functioning in balance with the need for other habitat types in the bay.	**Consistent.** The proposed project site includes deep unvegetated subtidal habitat. Although loss of deep subtidal habitat, including from piles supporting piers and mooring dolphins, would conflict with the INRMP, it would be mitigated by **MM-BIO-5**, **MM-BIO-6**, and **MM-BIO-7** to ensure that no net loss of this habitat type would occur. In addition, the project is required to comply with the District's Harbor Safety Plan, which provides mariners with the District's policies regarding pollution prevention and protection of the region's resources. No additional mitigation is required to avoid a conflict with this objective.
Moderately deep subtidal	4.3.2 Conserve and enhance the attributes of moderately deep habitat that support diverse and abundant invertebrate forage for fishes and birds, as well as needed exchanges of energy, materials, and biota among habitats, in balance with the need for shallow and intertidal habitats.	**Consistent.** The proposed project site includes moderately deep unvegetated subtidal habitat and limited areas of moderately deep vegetated subtidal habitat. Although any loss of moderately deep unvegetated subtidal habitat, including from piles supporting piers and moor dolphins, would conflict with the INRMP, it would be mitigated by **MM-BIO-5**, **MM-BIO-6**, and **MM-BIO-7** to ensure that no net loss of this habitat type would occur. No additional mitigation is required to avoid a conflict with this objective.
Unvegetated Shallow Subtidal Habitat	4.3.3 Conserve and enhance the attributes of unvegetated shallow subtidal sites that sustain a diverse and abundant invertebrate community, fish and wildlife foraging, nursery function for numerous fishes, as well as an ecological role in detritus-based food web support.	**Consistent.** The proposed project site includes unvegetated shallow subtidal habitat. Although any loss of unvegetated shallow subtidal habitat, including from the restoration of the quay wall revetments and piles supporting piers, would conflict with the INRMP, it would be mitigated by **MM-BIO-5**, **MM-BIO-6**, and **MM-BIO-7** to ensure that no net loss of this habitat type would occur. No additional mitigation is required to avoid a conflict with this objective.
Vegetated shallows	4.3.4 Conserve and enhance the attributes of vegetated shallow subtidal sites that sustain a diverse and abundant invertebrate community, fish and wildlife foraging, nursery function for numerous fishes, as well as an	**Consistent.** The proposed project site includes some limited areas of vegetated shallow subtidal habitat. Although any loss of vegetated shallow subtidal habitat, including from the restoration of the quay wall revetments and piles supporting piers, would conflict with the INRMP, it would be mitigated by **MM-BIO-5**, **MM-BIO-6**, and **MM-BIO-7** to ensure that no net loss of this habitat type would occur. No additional mitigation is required to avoid a conflict with this objective.

Topic Area	Objective	Conflict Analysis
	ecological role in detritus-based food web support.	
Intertidal flats	4.3.5 Achieve a long-term net gain in the area, function, value, and permanence of intertidal flats, and the physical conditions that support this habitat.	**Consistent.** The proposed project site does not include intertidal flats and would not result in any loss of this habitat. No additional mitigation is required to avoid a conflict with this objective.
Salt marsh	4.3.6 Ensure no net loss of existing structure and function of salt marsh habitat, and achieve a long-term net gain in its quantity, quality, and permanence.	**Consistent.** The proposed project site does not include salt marsh and would not result in any loss of this habitat. No additional mitigation is required to avoid a conflict with this objective.
Artificial shoreline structures	4.3.7 Through engineering solutions, minimize the use of shoreline stabilization structures that impact or replace natural intertidal habitats, and maximize the value and function that necessary artificial structures contribute to the bay ecosystem.	**Consistent.** The proposed project site includes the repair and maintenance of existing quay wall revetments that would require restoration and enhancement to avoid continued deterioration. The work would be limited to only the necessary upgrades to ensure the continued stability of the landside structures and continued resiliency from future storms and sea level rise. The habitat function would continue to be similar to existing conditions. Although any loss of unvegetated and vegetated shallow subtidal habitat, including from the restoration of the quay wall revetments and piles supporting piers, would conflict with the INRMP, it would be mitigated by **MM-BIO-5**, **MM-BIO-6**, and **MM-BIO-7** to ensure that no net loss of this habitat type would occur. No additional mitigation is required to avoid a conflict with this objective.
Salt ponds	4.3.8 Protect and enhance the important wildlife functions of the salt ponds, with emphasis on special status birds, shorebird foraging and roosting, and sea bird nesting.	**Consistent.** The proposed project site does not include salt ponds and would not result in any loss of this habitat. No additional mitigation is required to avoid a conflict with this objective.
Upland transitions	4.3.9 Ensure no net loss of availability, structure, and function of high value adjacent uplands, and achieve a long-term net gain in their quantity, quality, and permanence.	**Consistent.** The proposed project site does not include any high value uplands and would not result in any loss of this habitat. No additional mitigation is required to avoid a conflict with this objective.
River mouths and floodplains	4.3.10 Allow river mouths and floodplains to fulfill or at least mimic their natural ecological function	**Consistent.** The proposed project site does not include any river mouths or floodplains and would not result in any modifications to such any features or conditions. No

Topic Area	Objective	Conflict Analysis
	as an intermittent and episodic source of sedimentation, organic matter, and freshwater input for the bay.	additional mitigation is required to avoid a conflict with this objective.
Invasive species	4.4.1 Minimize the harmful ecological, economic, and human health impacts of aquatic invasive species in San Diego Bay.	**Consistent.** NASCCO is required to comply with the District's Harbor Safety Plan, which outlines ballast discharge regulations for vessels arriving from outside the Pacific Coast Region in order to minimize the introduction of harmful invasive species into the region's waters.
Plankton	4.4.2 Identify and manage the physical and chemical factors in the bay that contribute to plankton productivity, and use of the bay by zooplankton from coastal waters.	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. No additional mitigation is required to avoid a conflict with this objective.
Benthic algae	4.4.2.1 Identify and then conserve the food web and other functions of algal functional groups that reflect bay ecosystem health.	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures and no net loss of marine habitat would occur. No additional mitigation is required to avoid a conflict with this objective.
Invertebrates	4.4.2.2 Identify and conserve the abundance, biomass, and diversity of invertebrate functional groups that reflect health in each habitat and the ecosystem as a whole. Ensure that harvested invertebrate species are safe for human consumption.	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures and no net loss of marine habitat would occur. No additional mitigation is required to avoid a conflict with this objective.
Fishes	4.4.3 Conserve and enhance fish population abundance and diversity, with priority to those using the bay as a nursery or refuge, and to indigenous bay species.	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures and no net loss of marine habitat would occur. No additional mitigation is required to avoid a conflict with this objective.
Harvest management	4.4.3.1 Foster harvest management that can support viable, self-sustaining populations and promote native species	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of

Topic Area	Objective	Conflict Analysis
	richness within the San Diego Bay ecosystem.	mitigation measures and no net loss of marine habitat would occur. No additional mitigation is required to avoid a conflict with this objective.
Artificial propagation	4.4.3.2 Explore the potential for enhancing the numbers of fish species that are in decline through artificial propagation in San Diego Bay while protecting the bay ecosystem.	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures and no net loss of marine habitat would occur. No additional mitigation is required to avoid a conflict with this objective.
Birds	4.4.4 Maintain, enhance, and restore habitats on San Diego Bay aimed at providing for the health of resident and migratory populations of birds that rely on the bay to complete their life cycle. Foster broader public knowledge and appreciation of the functional, aesthetic, recreational, and economic values of the bird resources of the bay.	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. Consistent with the Migratory Bird Treaty Act, the proposed project includes mitigation that requires avoiding construction activities during the nesting season for birds or conducting preconstruction nesting surveys. In addition, no net loss of foraging habitat would occur. No additional mitigation is required to avoid a conflict with this objective.
Marine mammals	4.4.5 Maintain a healthy balance of marine mammal species inhabiting or visiting San Diego Bay.	**Consistent.** The proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. Mitigation measures would avoid significant noise impacts on marine mammals during construction activities and no net loss of marine habitat would occur. No additional mitigation is required to avoid a conflict with this objective.
Green sea turtle	4.4.6.1 Contribute to the recovery of the listed green sea turtle population consistent with the USFWS Recovery Plan through conservation measures in San Diego Bay.	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures and no net loss of marine habitat would occur. No additional mitigation is required to avoid a conflict with this objective.
California least tern	4.4.6.2 Contribute to the recovery of least tern numbers based on population size, distribution, and secure nesting site numbers by providing clear benefit to	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. No net loss of marine habitat (including least tern foraging habitat) or no significant

Topic Area	Objective	Conflict Analysis
	the species in a cost-effective manner. Manage predators of the California least tern to maximize colony success as measured by fledgling productivity and pair numbers.	impacts would occur on least tern nesting sites. No additional mitigation is required to avoid a conflict with this objective.
Light-footed clapper rail	4.4.6.3 Protect the listed light-footed clapper rail population inhabiting San Diego Bay and seek to contribute to its recovery	**Consistent.** This objective does not directly apply to the proposed project and there are no refuge areas within the project area. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. No significant impacts on nesting birds would occur and there would be no net loss of foraging habitat. No additional mitigation is required to avoid a conflict with this objective.
Western snowy plover	4.4.6.4 Due to a local decline in western snowy plovers, identify and correct the problem related to water quality, invertebrates, and sick or dying snowy plovers. Protect the listed western snowy plover population inhabiting San Diego Bay and seek to contribute to its recovery.	**Consistent.** This objective does not directly apply to the proposed project and there are no remnant dune areas within the project area. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. No significant impacts on nesting birds would occur and there would be no net loss of foraging habitat. No additional mitigation is required to avoid a conflict with this objective.
Salt marsh bird's beak	4.4.6.5 Seek the recovery of the salt marsh bird's beak population through habitat protection and enhancement	**Consistent.** This objective does not directly apply to the proposed project and there are no remnant dune areas within the project area. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. No significant impacts on nesting birds would occur and there would be no net loss of foraging habitat. No additional mitigation is required to avoid a conflict with this objective.
Climate Change	5.1.1 Offset the adverse impacts of climate change through annual goal setting based on science-based scenarios, targets, collaborative planning, adaptive management, and joint pilot projects.	**Consistent.** The project includes restoration and enhancement of the existing quay wall, which would be rebuilt to withstand future storm events and sea level rise resulting from climate change. No additional mitigation is required to avoid a conflict with this objective.

Topic Area	Objective	Conflict Analysis
Sustainable Resource Use and Development	5.1.2 Sustain natural resources and Port and Navy institutional missions into the future without decline to natural resource assets or compromising the ability to grow those assets, by enabling innovation in planning, design, project management, and implementation.	**Consistent.** This objective does not directly apply to the proposed project. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. No additional mitigation is required to avoid a conflict with this objective.
Dredge and fill projects	5.2.1 Conduct necessary dredging and dredge disposal in an environmentally and economically sound manner	**Consistent.** The project does not propose any dredging or disposal of dredge materials. However, should dredging be required by the RWQCB in areas subject to CAO R9-2012-0024 that previously were inaccessible, a potential conflict with the INRMP could occur. However, all dredging would employ best practices and would be consistent with the requirements specified by the RWQCB, which may include the CAO and the mitigation measures identified in the 2011 Shipyard Final EIR. In addition, **MM-HAZ-10**, **MM-WQ-1** and **MM-WQ-2** would be required to ensure no significant adverse impacts. No additional mitigation is required to avoid a conflict with this objective.
Ship and boat maintenance	5.2.2 Manage the maintenance of boats and ships in San Diego Bay in a manner that achieves significantly improved water and sediment quality, healthier marine organisms, and economic good sense.	**Consistent.** The proposed project includes in-water construction and landside construction related to the quay wall revetments and the Repair Wharf Complex which potentially may conflict with the INRMP. However, as required by the District's JRMP and its accompanying BMP Design Manual, BMPs would be implemented to minimize water quality impacts from these activities. In addition, **MM-WQ-1** and **MM-WQ-2** would be required to minimize water quality impacts to less than significant by ensuring in-water construction activities do not disturb sediment that then enters the water column and is transported outside the immediate area of disturbance. No additional mitigation is required to avoid a conflict with this objective.
Shoreline construction	5.2.3 Seek improved habitat value of developed shorelines and marine structures and their functional contribution to the ecosystem.	**Consistent.** The proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. In addition, the project would restore and enhance the quay wall, which would continue the unvegetated hard bottom intertidal habitat currently present. No additional mitigation is required to avoid a conflict with this objective.

Topic Area	Objective	Conflict Analysis
Water surface use and shoreline disturbance	5.2.4 Properly balance the various surface uses of the bay as a navigable waterway and associated shorelines with conservation priorities for waterbirds and shorebirds	**Consistent.** The proposed project would not impede the implementation of this objective. The proposed project is located within the NASSCO shipyard. Although the project could conflict with the INRMP, the project would not interfere with the existing navigable waterway and would not result in a net reduction of shoreline habitat pursuant to **MM-BIO-5**, **MM-BIO-6**, and **MM-BIO-7**. In addition, the **MM-BIO-5** would ensure there would be no net loss of foraging habitat. No additional mitigation is required to avoid a conflict with this objective.
Industrial	5.3.2.1 Reduce and minimize stormwater pollutants harmful to the bay's ecosystem from entering the bay from watershed users.	**Consistent.** The proposed project includes in-water construction and landside construction related to the quay wall and the Repair Complex Wharf which could conflict with the INRMP. However, as required by the District's JRMP and its accompanying BMP Design Manual, BMPs would be implemented to minimize water quality impacts from these activities. This would include BMPs to prevent untreated stormwater from entering the bay. No additional mitigation is required to avoid a conflict with this objective.
Freshwater inflow management	5.3.3 Encourage water managers within the bay watershed to manage freshwater inflows to help maintain the natural salinity and nutrient levels of the bay's wetlands and intertidal zone.	**Consistent.** Stormwater generated on the NASSCO leasehold's landside would be treated in accordance with the Industrial General Permit and the District's BMP design manual and conveyed through the existing storm drain system. No additional mitigation is required to avoid a conflict with this objective.
Remediation of contaminated sediments	5.4.1 Ensure that San Diego Bay finfish and shellfish are safe to eat, that the food web is not adversely altered and that risks are minimized to recreational and commercial water contact users from the effects of contaminated sediment.	**Consistent.** The proposed project could impede the implementation of this objective. However, as indicated in this EIR, all impacts on biological resources would be less than significant after implementation of mitigation measures. In addition, the project is required to obtain a CWA Section 404 permit and a Rivers and Harbors Act Section 10 permit from the USACE and a CWQ Section 401 water quality certification from the RWQCB. The project also is required to comply with **MM-HAZ-10** which, if determined necessary by the RWQCB, based on existing site sediment contamination levels, would require the proposed project to comply with the requirements of the RWQCB to either avoid contaminated areas or remediate to acceptable levels (see Section 3.5, *Hazards and Hazardous Materials*). Under either situation, contaminated sediments would not be distributed through the water column to spread beyond the project area and the proposed project would not exacerbate the existing contaminated sediment condition. No additional mitigation is required to avoid a conflict with this objective.

Topic Area	Objective	Conflict Analysis
Oil spill prevention and clean up	5.4.2 Prevent spills of oil and other hazardous substances, and ensure the effectiveness of prevention and response planning	**Consistent.** The proposed project could impede the implementation of this objective. However, as indicated in Section 3.5, *Hazards and Hazardous Materials*, the project would be required to comply with U.S. DOT Hazardous Materials Regulations related to the transport of hazardous substances. Furthermore, NASSCO would implement BMPs from its SPCC in accordance with 40 CRR 112.7. In addition, the project is required to comply with **MM-HAZ-1** through **MM-HAZ-9** which require several BMPs for handling hazardous substances. No additional mitigation is required to avoid a conflict with this objective.
Cumulative effects	5.5 Minimize adverse cumulative effects on habitats and species of the bay ecosystem	**Consistent.** The proposed project could impede the implementation of this objective. However, as indicated in Chapter 4, *Cumulative Impacts*, all cumulative impacts would be reduced to less than significant with mitigation incorporated. No additional mitigation is required to avoid a conflict with this objective.
Outdoor recreation and environmental education	5.6 Establish a culture of conservation for the bay as an ecosystem, including the relationship to its watershed	**Consistent.** This objective does not directly apply to the proposed project because the proposed project would make improvements to a working shipyard and is not open to the public and does not include any recreational facilities. However, the proposed project would not impede the implementation of this objective. As indicated in this EIR, all impacts resulting from implementation of the proposed project would be less than significant after implementation of mitigation measures. No additional mitigation is required to avoid a conflict with this objective.
Long-term monitoring	6.2.2 Provide monitoring that enhances bay managers' understanding and capacity to respond to a changing San Diego Bay and make better decisions regarding natural resource conservation and sustainable uses. Detect the extent and spatial scale of trends in critical ecosystem structural and functional attributes that contribute to the bay's important role as nursery for juvenile fish and invertebrates, as a major migratory stopover for shorebirds and waterfowl, as a breeding/nesting ground for wildlife, and for supporting endemic and	**Consistent.** The proposed project is a modernization project of specific facilities within the existing NASSCO shipyard critical for future shipyard operations. It is not a scientific project or program designed to collect data of biological resources. However, the proposed project would not conflict with this objective. Mitigation measures are required to avoid significant impacts on biological resources, including monitoring of marine mammals during in-water pile driving. No additional mitigation is required to avoid a conflict with this objective.

Topic Area	Objective	Conflict Analysis
	rare species. Determine the cause of detected trends, separating management effects from natural availability. Use the trends to assess the relationship between physical and chemical factors and biological factors.	
Water and sediment quality research to support management needs	6.2.3 Improve the ability to build on existing and new project monitoring experience to make the bay healthier and more sustainable.	**Consistent.** The proposed project is a modernization project of specific facilities within the existing NASSCO shipyard critical for future shipyard operations. It is not a scientific project or program designed to improve the collection of water and sediment quality data. However, the proposed project would not conflict with this objective. The proposed project is required to obtain CWA Section 404 and Rivers and Harbors Act Section 10 permits from the USACE and a CWA Section 401 water quality certification from the RWQCB. Moreover, the project is required by **MM-HAZ-10** to conduct pre- and post-construction sampling and analysis to demonstrate that additional remediation is not needed. Should the RWQCB determine that additional remediation efforts are required, then sediment testing would be required until it could be determined that contamination levels are below the performance criteria discuss in Section 3.5, *Hazards and Hazardous Materials*. No additional mitigation is required to avoid a conflict with this objective.
Research to Support Management Decisions	6.2.4 Support management decisions by conducting research on the mechanisms and processes that provide value to the bay as an ecosystem.	**Consistent.** The proposed project is a modernization project of specific facilities within the existing NASSCO shipyard critical for future shipyard operations. It is not a research project or program designed to inform management decisions related to the bay as an ecosystem. However, the proposed project would not conflict with this objective.
Data integration, access, and reporting	6.3 Ensure the most effective integration, analysis, and dissemination of monitoring and research on San Diego Bay, and communication of this information to all concerned, so resources are targeted effectively for bay ecosystem health.	**Consistent.** The proposed project is a modernization project of specific facilities within the existing NASSCO shipyard critical for future shipyard operations. It is not a research project or program designed to inform management decisions related to the bay as an ecosystem. However, the proposed project would not conflict with this objective.

Summary

As discussed above, the project would not result in any changes in existing land uses. Rather, the project would result in on-site improvements that would ensure the continued use of the project site for its designated uses. NASSCO would be required to obtain all necessary approvals from agencies with regulatory oversight, including the District, RWCQB, and USACE.

However, prior to mitigation, there would be a potential conflict with applicable regulations and plans, the result of which would be a significant impact on the environment (**Impact-LU-1**). Therefore, to ensure consistency with the Port Master Plan, the CCA and the San Diego Bay INRMP, **MM-BIO-1** through **MM-BIO-7** are required to avoid impacts on biological resources, including on special status species, sensitive marine habitat, and from proposed fill. **MM-WQ-1** and **MM-WQ-2** are required to avoid water quality impacts from disturbing sediments. Similarly, **MM-HAZ-1** through **MM-HAZ-9** require several BMPs for handling hazardous substances and **MM-HAZ-10** is required to ensure contaminated sediments are not released into the water column and spread beyond the current contaminated areas in the project site. Although required by law and not as mitigation measures, compliance with the requirements of the CWA Section 404 and the Rivers and Harbors Act Section 10 permits which must be obtained from the USACE and the CWQ Section 401 water quality certification which must be obtained from the RWQCB, as well as any measures required by the RWQCB pursuant to CAO R9-2012-0024, also would reduce potential impacts. Therefore, after mitigation is incorporated, **Impact-LU-1** would be reduced to less than significant.

Level of Significance Prior to Mitigation

Without implementation of mitigation measures described above, the proposed project may conflict with applicable plans, policies or regulations adopted for the purposes of avoiding or mitigating an environmental effect. Potentially significant impact(s) may include the following.

> **Impact-LU-1: Conflict with the Port Master Plan, the California Coastal Act and San Diego Bay Integrated Natural Resources Management Plan.** Prior to the incorporation of mitigation measures **MM-BIO-1** through **MM-BIO-7, MM-HAZ-1** through **MM-HAZ-10**, and **MM-WQ-1** and **MM-WQ-2**, a potential conflict with the California Coastal Act and Integrated Natural Resources Management Plan could occur, resulting in potential impacts on marine wildlife, sensitive habitat, and water quality.

Mitigation Measures

For **Impact-LU-1**:

> Implement mitigation measures **MM-BIO-1** through **MM-BIO-7** as described in Section 3.2, *Biological Resources*.
>
> Implement mitigation measures **MM-HAZ-1** through **MM-HAZ-10** as described in Section 3.5, *Hazards and Hazardous Materials*.
>
> Implement mitigation measures **MM-WQ-1** and **MM-WQ-2** as described in Section 3.6, *Hydrology and Water Quality*.

Level of Significance after Mitigation

To ensure consistency with the Port Master Plan, the CCA and the San Diego Bay INRMP, **MM-BIO-1 through MM-BIO-7** would be implemented to avoid impacts on biological resources, including on special status species, sensitive marine habitat, and from proposed fill. **MM-WQ-1** and **MM-WQ-2** are required to avoid water quality impacts from disturbing sediments. Similarly, **MM-HAZ-1** through **MM-HAZ-9** require several BMPs for handling hazardous substances and **MM-HAZ-10** is required to ensure contaminated sediments are not released into the water column and spread beyond the current contaminated areas in the project site. Therefore, after mitigation is incorporated, **Impact-LU-1** would be reduced to less than significant.

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Section 3.8
Noise and Vibration

3.8.1 Overview

This section describes the existing conditions and applicable laws, regulations, plans, and policies governing project-related noise and vibration. The section also discusses the proposed project's potential to increase noise and vibration in the project vicinity during construction and operation. Impacts related to noise and vibration were considered significant if the proposed project would (1) generate 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; (2) generate excessive groundborne vibration or groundborne noise levels; or (3) for a project in 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, exacerbate the existing exposure of people residing or working in the project area to excessive noise levels.

This section focuses on potential noise and vibration impacts on people and surrounding properties. Potential noise effects on wildlife are addressed in Section 3.2, *Biological Resources*. As discussed in Section 3.8.6.3, *Project Impacts and Mitigation Measures*, all impacts related to noise and vibration would be less than significant.

3.8.2 Noise Fundamentals

This section provides an overview of key concepts and acoustical terms used in the analysis of environmental and community noise. Noise is commonly defined as sound that is unwanted or that is objectionable because it is disturbing or annoying. 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) to a hearing organ, such as a human ear.

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.

3.8.2.1 Frequency, Amplitude, and Decibels

Continuous sound can be described by *frequency* (pitch) and *amplitude* (loudness). A low-frequency sound is perceived as low in pitch. 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, 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 determines the loudness of that source. The amplitude of a sound is typically described in terms of the *sound pressure level*, which refers to the root-mean-square pressure of a sound wave and is measured in units called

micropascals (µPa). Sound pressure levels for different kinds of noise environments can range from less than 100 to more than 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 sound pressure level (also referred to simply as the sound level) in terms of decibels, abbreviated dB.

Because decibels represent noise levels on 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. 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.

3.8.2.2 Perception of Noise and 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 sound pressure level in that range. In general, people are most sensitive to the frequency range of 1,000 to 8,000 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 human sensitivity to those frequencies. The resulting sound pressure level 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 3.8-1 describes typical A-weighted sound levels for various noise sources.

Table 3.8-1. 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 2013a.
dBA = A-weighted decibels.

3.8.2.3 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. The metrics used in this report are described below.

Equivalent Sound Level (Leq) is the most common metric used to describe short-term average noise levels. The Leq describes the average acoustical energy content of noise for an identified period of time, commonly 1 hour.

Maximum Sound Level (Lmax) refers to the maximum sound level that occurs during the noise measurement period. More specifically, Lmax describes the root-mean-square sound level that corresponds to the loudest 1-second interval that occurs during the measurement. (The minimum sound level [Lmin] is the corresponding metric that describes the minimum level during the noise measurement period.)

Community Noise Equivalent Level (CNEL) is a measure of the 24-hour average A-weighted noise level, which 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). Therefore, 5 dBA is added to the Leq during the evening hours of 7:00 p.m. to 10:00 p.m.,[1] and 10 dBA is added to the Leq during the nighttime hours of 10:00 p.m. to 7:00 a.m.[2] The energy average is then taken for the whole 24-hour day.

3.8.2.4 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 a number of important factors. The primary factors of interest for environmental noise include geometric spreading, ground absorption, atmospheric effects, and shielding (by natural or human-made features).

3.8.2.5 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 3.8.2.6, *Noise-sensitive Land Uses*, below). The effects of noise on people can be divided into the following three categories:

- Subjective effects of annoyance, nuisance, or dissatisfaction;
- Interference with activities such as speech, sleep, learning, or working; and
- Physiological effects such as startling and hearing loss.

In most cases, effects from sounds typically found in the natural environment are limited to the first two categories, creating an annoyance or interfering with activities. Physiological effects and hearing loss would be more commonly associated with human-made noise, such as in an industrial or an occupational setting. No completely satisfactory method exists to measure the subjective effects of sound or the corresponding reactions of annoyance and dissatisfaction. This lack of a common standard arises primarily from the wide variation in individual thresholds of annoyance and habituation to sound. Therefore, an important way of determining a person's subjective reaction to a new sound is by comparing it to the existing baseline or "ambient" environment to which that person has adapted. 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. In the normal environment, the healthy human ear can detect changes of about 2 dBA; however, it is widely accepted that a doubling of sound energy, which results in a change of 3 dBA in the normal environment, 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 is generally barely detectable.

3.8.2.6 Noise-Sensitive Land Uses

Noise-sensitive land uses typically include, but are not necessarily limited to, residential uses, hospitals, nursing facilities, intermediate care facilities, child educational facilities, libraries,

[1] A 5 dB noise increase is generally considered to be a readily perceptible change in the noise level for a listener.

[2] A 10 dB noise increase is generally perceived as a doubling of the noise level for a listener.

museums, and child care facilities (City of San Diego 2015). Based on their transient residential nature, hotels are considered to be noise-sensitive only during the evening and nighttime hours of 7:00 p.m. to 7:00 a.m. Parks, which are closed during nighttime hours, are considered to be noise sensitive only during their typical operational hours of 6:00 a.m. to 10:30 p.m. Schools, museums, and other institutional uses are also considered to be noise sensitive only during their standard hours of operation.

Another type of noise-sensitive receptor that can be affected by in-water construction (such as the proposed pile-driving activities) is aquatic wildlife. Underwater noise levels from pile driving were analyzed to assess potential impacts on fish and marine mammals. Additional discussion and the results of these analyses are provided in Section 3.2, *Biological Resources*.

3.8.3 Fundamentals of Environmental Vibration

This section provides an overview of key concepts and terms used in the analysis of environmental groundborne vibration. Groundborne vibration is a small, rapidly fluctuating motion transmitted through the ground. The effects of groundborne vibrations are typically limited to nuisance or annoyance for people; however, 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). 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.

3.8.3.1 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 vibration can be measured in terms of displacement, velocity, or acceleration. 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 per second (in/s^2).

3.8.3.2 Vibration Descriptors

As noted above, there are various ways 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 descriptor used in this report is peak particle velocity (PPV), as described below.

Peak Particle Velocity is defined as the maximum instantaneous positive or negative peak amplitude of the vibration velocity. The unit of measurement for PPV is inches per second. Unlike many quantities used in the study of environmental acoustics, PPV is typically presented using linear values; it 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 California Department of Transportation [Caltrans] 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).

3.8.3.3 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. Low frequencies tend to dominate the spectrum at large distances from the source. The propagation of groundborne vibration is also influenced by geological factors such as soil conditions, depth to bedrock, soil strata, frost conditions, and water conditions.

3.8.3.4 Effects of Groundborne Vibration

Vibration can result in effects that range from annoyance to structural damage. Annoyance or disturbance for people may occur at vibration levels that are 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. If the vibration levels are high enough, building damage 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., cracked 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 and more 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 damage becomes a problem.

Human Disturbance or Annoyance

Groundborne vibration can be annoying for people and 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 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.

When groundborne vibration waves encounter a building, vibrational energy is transmitted to the structure, causing building surfaces (walls, floors, and ceilings) to vibrate. This movement may be felt directly by building occupants. It 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 the 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*. Any perceptible effect (vibration or groundborne noise) can lead to annoyance. The degree to which a person is annoyed depends on the activity they are participating in at the time of disturbance. For example, someone sleeping or reading will be more sensitive than someone who is engaged in any type of physical activity.

3.8.3.5 Vibration-Sensitive Land Uses

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 vibration damage impacts.

Land uses that would be considered sensitive to human annoyance caused by vibration are generally the same as those that would be sensitive to noise and typically include residential uses, hospitals, nursing facilities, intermediate care facilities, child educational facilities, libraries, museums, and child care facilities. It is noted, however, that vibration effects are typically considered only inside occupied buildings and not at outside areas such as residential yards or open spaces. Based on their transient residential nature, hotels are considered to be sensitive to human annoyance effects from vibration only during the evening and nighttime hours of 7:00 p.m. to 7:00 a.m. Schools, museums, and other institutional uses are considered to be sensitive to human annoyance effects from vibration only during their standard hours of operation.

3.8.4 Existing Conditions

The predominant noise sources influencing noise levels in the vicinity of the project site include vehicle traffic on Harbor Drive, I-5, I-15, and SR-75; train activity on the BNSF rail line and San Diego Metropolitan Transit System (MTS) Blue Line; aircraft activity associated with San Diego International Airport and Naval Air Station North Island; marine traffic in San Diego Bay; and industrial land use activities. Harbor Drive, which is a major north-south transportation corridor in the area, borders the NASSCO shipyard to the north. The BNSF rail line is located immediately north of Harbor Drive, approximately 750 feet from the nearest project site boundary. The San Diego MTS Blue Line is directly north of the BNSF rail line. Railway noise includes that generated by daily passenger (Amtrak) and commuter (Coaster) trains, as well as BNSF freight trains and MTS Blue Line trolleys.

The project site is located in a highly industrialized area along the San Diego Bay, with heavy industry land uses to the northwest; military land uses to the east and southeast; and military, light industry, and commercial and office land uses to the north. Noise sources associated with industrial land uses typically include heavy machinery and equipment (e.g., air compressors, generators), as well as various types of vehicles (e.g., delivery trucks, passenger vehicles).

Regarding other transportation noise sources, I-5 is located north of the BNSF rail line, approximately 2,030 feet from the nearest project site boundary, and intersects I-15 northeast of the project site. I-15 is located approximately 2,450 feet from the nearest project site boundary, and SR-75, which crosses the bay onto Coronado Island west of the project site, is approximately 2,300 feet from the nearest project site boundary. The runways of the San Diego International Airport and Naval Air Station North Island are both located approximately 3.3 miles from the project site. Because these noise sources are all distant from the project site (over 1,000 feet away), they contribute less to existing on-site noise levels compared to other sources. However, these noise sources are important to provide context for understanding the noise environment in the areas surrounding project site.

The nearest sensitive receptors within the City of San Diego include residences in the Barrio Logan neighborhood on the north side of Harbor Drive and the BNSF rail line. The closest residence is located approximately 1,180 feet north of the nearest project site boundary. The nearest residences within the City of Coronado are located across the San Diego Bay approximately 1.4 miles from the project site and are not discussed further due to their distance from the project site.

3.8.4.1 Noise Monitoring

To document existing ambient noise conditions, noise monitoring was conducted between January 7 and 9, 2019 at five locations in the vicinity of the project site for the adjacent BAE Systems Waterfront Improvement Project. Existing noise levels in areas located north of Harbor Drive range from 61 to 69 dB CNEL, and the existing noise level across the bay on Coronado Island, north of SR-75, ranges from 63 to 66 dB CNEL (San Diego Unified Port District 2020).

3.8.5 Applicable Laws, Regulations, Plans, and Policies

The District does not have its own noise or vibration standards and does not currently maintain formal impact thresholds for assessing potential impacts under CEQA. The sections below discuss various laws, regulations, and policies that may apply to the proposed project or otherwise be useful in developing thresholds of impact for the proposed project.

3.8.5.1 State Regulations

California Department of Transportation Noise and Vibration Standards

None of the local laws and regulations discussed below provide any quantitative criteria regarding groundborne noise and vibration. Although the proposed project would not be subject to Caltrans oversight, guidance published by the agency nonetheless provides groundborne vibration criteria that can be useful in establishing thresholds of impact. Caltrans' widely referenced *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020) 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 3.8-2 and 3.8-3.

Table 3.8-2. Caltrans Guidance Manual 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.
PPV = peak particle velocity; in/s = inches per second.

Table 3.8-3. Caltrans Guidance Manual 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.
PPV = peak particle velocity; in/s = inches per second.

3.8.5.2 Local

Because of the distance from the project site to the nearest sensitive receptors in the City of Coronado (1.4 miles away), regulations applicable to the City of Coronado are not discussed below. The local regulatory setting focuses on applicable regulations and standards for the City of San Diego. The project would only result in temporary noise from project construction; thus, the City of San Diego's construction standards stated in the municipal code are the only applicable standards.

City of San Diego Municipal Code Noise Abatement and Control Ordinance

Section 59.5.0401 of the City of San Diego (City) Noise Abatement and Control Ordinance 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 3.8-4 at any location in the City of San Diego on or beyond the boundaries of the property on which the noise is produced.

Table 3.8-4. City of San Diego Noise Limits

Land Use	Time of Day	1-hour L_{eq} (dBA)
Single-family residential	7:00 a.m. to 7:00 p.m.	50
	7:00 p.m. to 10:00 p.m.	45
	10:00 p.m. to 7:00 a.m.	40
Multi-family residential (up to a maximum density of 1/2,000)	7:00 a.m. to 7:00 p.m.	55
	7:00 p.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
All other residential	7:00 a.m. to 7:00 p.m.	60
	7:00 p.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
Commercial	7:00 a.m. to 7:00 p.m.	65
	7:00 p.m. to 7:00 a.m.	60
Industrial or Agricultural	Anytime	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 Section 59.5.0404 (Construction Noise)

The City 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; on legal holidays, as specified in Section 21.04 of the City 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 construction noise in the vicinity of the work site would be less objectionable at night 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; whether the type of work to be performed would generate noise at a level that would cause significant disturbance in the vicinity of the work site; whether great economic hardship would occur if the work were spread over a longer period of time; and whether proposed night work is in the general public interest. Also considered are the character and nature of the neighborhood where the proposed work site is located. The administrator shall prescribe the 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 residentially zoned property is prohibited by ordinance.

3.8.6 Project Impact Analysis

3.8.6.1 Methodology

Construction Noise

Construction-related noise was analyzed using data and modeling methodologies from the Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (FHWA 2008), which predicts average noise levels at nearby receptors by analyzing the types of equipment, the distance from source to receptor, usage factor,[3] and the presence or absence of intervening shielding between source and receptor. This methodology calculates composite average noise levels for the multiple pieces of equipment scheduled for each construction phase. The source-to-receptor distances used in the analyses were the acoustical average distances between the relevant construction area and each receptor. The acoustical average distance is used to represent noise sources that are mobile or distributed over an area, such as the project site; it is calculated by multiplying the shortest distance between the receiver and the noise source by the farthest distance, then taking the square root of the product.

To estimate increases over ambient noise levels due to construction activities, construction noise levels were compared to the corresponding measured noise levels. For locations where short-term ambient noise levels were measured, the ambient L_{eq} was used as the basis for comparison. For locations where long-term noise measurements were obtained, the average L_{eq} measured across all of the corresponding hours (i.e., daytime or nighttime) was used as the basis for comparison.

Construction Vibration

Construction-related vibration was analyzed using data and modeling methodologies provided by Caltrans's *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. Table 3.8-5 provides the PPV associated with the worst-case scenario for the construction equipment expected to be used by the proposed project; the levels are provided for a reference distance of 25 feet. Note that vibration-related equations from the Caltrans guidance manual were used to estimate the change in PPV levels over distance.

Table 3.8-5. Construction Equipment Vibration Levels

Equipment Item	Reference PPV at 25 feet (in/s)[1]
Impact pile driver	0.65
Vibratory pile driver	0.65

[1] Obtained from Caltrans 2020.
PPV = peak particle vibration; in/s = inches per second.

[3] Usage factor is the fraction of time the equipment is operating in its noisiest mode.

Operational Analysis

The general types of onsite operational activities (i.e., vessel service and repair) would remain the same as those that currently occur, and the overall intensity of the operations would not increase. As a result, a quantitative analysis of operational noise and vibration levels is not necessary.

3.8.6.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and the various laws, regulations, and policies discussed in Section 3.8.5, *Applicable Laws, Regulations, Plans, and Policies*. These provide the basis for determining the significance of impacts from noise and vibration associated with implementation of the proposed project. The District has not adopted its own specific significance thresholds for potential noise and vibration impacts; therefore, the District uses, where appropriate, the applicable standards and guidelines of other agencies, such as the City of San Diego and/or Caltrans.

Impacts are considered significant if the proposed project would result in any of the following:

1. 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. A significant impact would occur at any of the noise-sensitive receptors if:
    a. Daytime (7:00 a.m. to 7:00 p.m.) construction activity fails to comply with the construction noise standards provided by the municipal code of the City of San Diego (City of San Diego Municipal Code Section 59.5.0404); or
    b. Nighttime (7:00 p.m. to 7:00 a.m.) construction activity exceeds existing ambient noise levels and fails to comply with the applicable nighttime noise standards provided by the municipal codes of the City of San Diego (City of San Diego Municipal Code Section 59.5.0401), or exceeds existing ambient noise levels by 5 dBA (a readily perceptible change) or more, 12-hour L_{eq}.
2. Generation of excessive groundborne vibration or groundborne noise levels. A significant impact would occur if construction or operation of the project exceeds Caltrans' vibration criteria for damage to structures at any nearby buildings or annoyance to people (distinctly perceptible vibration) at any vibration-sensitive location.
3. For a project in 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.

3.8.6.3 Project Impacts and Mitigation Measures

Threshold 1: Would the proposed project result in the 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?

Impact Discussion

Construction

Construction activities associated with the project would result in a temporary increase in noise. Project construction would include five main components: floating dry dock replacement and modification (January 2024 to September 2025), Repair Complex Wharf improvements (September 2025 to July 2026), quay wall revetment repairs (January 2025 to February 2025), additional as-needed quay wall revetment repairs (January 2026 to December 2028), and structural pile repair and replacement (January 2025 to January 2034). Construction noise would fluctuate throughout the duration of project construction depending on the type of construction activities occurring and equipment used on any given day; the distances from construction activity to noise-sensitive receptors; any noise-attenuating features, such as topography, vegetation, and existing structures; and existing ambient noise levels. Although specific equipment used would vary for the different components of construction, project construction would generally involve the use of heavy construction equipment such as cranes, excavators, jackhammers, impact and vibratory pile drivers, dump trucks, shears, air compressors, concrete trucks and pumps, welding units, generators, and haul trucks. These pieces of equipment generate noise levels that range from 73 to 95 dB at 50 feet (FHWA 2008:3). No blasting would occur as part of the project.

Construction activities would occur 24 hours per day and seven days per week. However, construction work during evening and nighttime hours (between 7:00 p.m. and 7:00 a.m.) would be limited to project deliveries, formwork, welding, and other activities that would generate lower noise levels. No pile driving would be conducted during the evening or nighttime hours (7:00 p.m. to 7:00 a.m.). The applicable City noise standard for daytime (7:00 a.m. to 7:00 p.m.) construction noise is a 12-hour L_{eq} of 75 dB, which is the L_{eq} over a 12-hour period. Noise modeling used a worst-case hour, which is a conservative approach because the resulting noise levels are higher than construction averaged over 12 hours.

Noise standards for evening and nighttime hours established in Section 59.5.0401 of the City of San Diego Municipal Code vary depending on the type of land use and time of day. The nearest sensitive receptors to the project site are single-family residences located in Subdistrict B of the Barrio Logan Planning District, a residential zone that also allows for heavy industrial land uses (i.e., those permitted in IH-2-1 zones). This residential zone is adjacent to industrially zoned areas. Therefore, in accordance with San Diego Code Section 59.5.0401(b), the applicable City noise standard for these receptors is the arithmetic mean of the specified standards for industrial and single-family residential land uses. The applicable noise standards are the following:

- Daytime hours (7:00 a.m. to 7:00 p.m.): 75 dB L_{eq}, 12-hour
- Evening hours (7:00 p.m. to 10:00 p.m.): 60 dB L_{eq}
- Nighttime hours (10:00 p.m. to 7:00 a.m.): 57.5 dB L_{eq}

For construction that would only occur during daytime hours, noise modeling conservatively assumed simultaneous operation of four pieces of heavy equipment (a crane, excavator, pile driver, and flatbed truck) near each other. For construction that would occur during evening and nighttime hours, noise modeling assumed simultaneous operation of a flatbed truck, a pump, and a welder near each other. Based on the modeling conducted using FTA guidance (FTA 2018), the nearest residence to the project site boundary would be exposed to construction noise levels of 62 dB L_{eq} during daytime hours and 54 dB L_{eq} during evening and nighttime hours. Therefore, daytime construction would not exceed the applicable daytime noise standard of 75 dB L_{eq}, and evening and nighttime construction would not exceed the applicable evening and nighttime noise standards of 60 and 57.5 dB L_{eq}, respectively. Detailed calculations are provided in Appendix J.

The noise level at more distant receptors would be lower because noise attenuates with distance. Therefore, none of the applicable City standards during daytime, evening, or nighttime hours would be exceeded at any sensitive receptors due to the operation of noise-generating construction equipment. In addition, these construction noise estimates are conservatively high because they do not account for any additional attenuation that would be provided by existing buildings, structures, or vegetation that exist along the sound path between construction sites and receptors.

Operation

Implementation of the project would not expand the existing use of the project site or expand existing shipyard operations, including any increase in capacity to service or build more ships. The same operations and maintenance activities would be undertaken in the same general locations and using the same types of equipment as are currently used. Shipyard operations would not introduce any new long-term sources of noise. In addition, the project would not appreciably increase the number of employees or visitors to the project site and, thus, there would be no measurable increase in traffic noise levels as a result of the project. For these reasons, operational noise levels are not anticipated to change from current conditions.

Level of Significance Prior to Mitigation

Implementation of the proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of local noise standards. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Threshold 2: Would the proposed project result in the generation of excessive groundborne vibration or groundborne noise levels?

Impact Discussion

Construction

Vibration assessments are generally separated into two distinct analyses: one that is concerned about the receiving land uses perception and associated level of annoyance to vibration-inducting activities, and the second which is concerned with the possibility of vibration-inducing activities to cause structural damage to nearby structures. Vibration-decibels, or VdB, is the unit of measurement most applicable to assessing annoyance and peak-particle velocity, or in/sec PPV, is the unit of measurement most applicable to assessing the potential for structural damage. Both assessments are conducted below.

Project construction would involve the use of ground vibration–intensive activities, such as impact and vibratory pile driving (i.e., although not representative of a typical day, the analysis conservatively assumes up to 10,000 pile strikes could occur on the most intensive construction day). Activities involving pile driving typically generate the highest vibration levels compared to other construction methods and are, therefore, of greatest concern when evaluating construction-related vibration impacts. Impact pile driving generates a vibration level of 1.52 in/sec PPV and 112 VdB at 25 feet when the equipment is being used at its upper range. Vibratory (i.e., sonic) pile driving generates a vibration level of 0.73 in/sec PPV and 105 VdB at 25 feet when the equipment is being used at its upper range (FTA 2018:184).

Regarding disturbance to vibration-sensitive uses, the buildings closest to the construction site are modern industrial buildings, none of which contain institutional uses or sensitive operations (e.g., medical laboratories). Residential uses are located over 1,000 feet from potential pile driving activities. Considering the reference levels for pile driving and the applicable threshold of 72 VdB (level for frequent events at places where people sleep), disturbance could be considered substantial within 540 feet from pile driving activities. No vibration-sensitive uses exist within this distance from potential pile driving locations.

Regarding structural damage, the applicable threshold for the prevention of structural damage at modern industrial/commercial buildings is 0.5 in/sec PPV (Caltrans 2013b). Assuming normal propagation conditions, vibration generated by impact and vibratory pile driving could exceed the threshold for structural damage within 53 and 32 feet of pile driving activity, respectively. No buildings or structures would be located within 53 feet of impact pile driving or 32 feet of vibratory pile driving. Refer to Appendix J for detailed vibration modeling calculations, which are based on FTA guidance (FTA 2018). Therefore, project construction would not result in disturbance to vibration-sensitive uses or structural damage to nearby structures from vibration-generating construction activities. This impact would be less than significant, and no mitigation is required.

Operation

Shipyard operations would not introduce any new long-term sources of vibration. As a result, there would be no new vibration sources that would cause impacts at offsite receptors. Therefore, operational vibration impacts would be less than significant.

Level of Significance Prior to Mitigation

Implementation of the proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Threshold 3: For a project in 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 Discussion

The San Diego International Airport and Naval Air Station North Island are the closest public and private airports, and their runways are both located approximately 3.3 miles from the project site. Although the project is located within the airport influence area for the San Diego International Airport, the project site is over 1.5 miles from the airport's 60 dB CNEL noise contour (San Diego County Regional Airport Authority 2014). An Airport Land Use Compatibility Plan (ALUCP) is currently being prepared for the Naval Air Station North Island and the noise contours prepared for the ALUCP EIR indicate that the project site is over 1.5 miles from the airport's 65 dB CNEL noise contour (San Diego County Regional Airport Authority 2019). The project is not located within two miles of a public private airstrip. The project would not include any new land use development where people would reside. Operation of the project would not expose existing employees to increased aircraft noise or require an increased number of employees. Therefore, the project would have no impact regarding the exposure of people residing or working in the project area to excessive aircraft-related noise levels, and no mitigation is required.

Level of Significance Prior to Mitigation

Implementation of the proposed project would not expose people residing or working in the project area to excessive noise levels from a private airstrip, public airport, or public use airport. No impact would occur.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

No impact would occur.

Section 3.9
Transportation, Circulation, and Parking

3.9.1 Overview

This section describes the existing conditions and applicable laws, regulations, plans, and policies for transportation, circulation, and parking, followed by an analysis of the proposed project's potential to (1) conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities; (2) conflict or be inconsistent with State 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; or (5) result in an insufficient parking supply that would lead to a decrease in public coastal access.

The transportation impact analysis presented in this section is based primarily on the *NASSCO Floating Dry Dock and Waterfront Improvement Project Transportation Impact Study* (TIS) prepared by Intersecting Metrics (2023, Appendix K). The TIS, which is included as Appendix K, provides additional data and information related to the transportation analysis.

As discussed in Section 3.9.4.3, *Project Impacts and Mitigation*, all impacts related to transportation, circulation, and parking would be less than significant. No mitigation is required.

3.9.2 Existing Conditions

3.9.2.1 Existing Roadway Network

Traffic associated with the proposed project would use the roadways and intersections surrounding the project site. These roadways and intersections are within the jurisdiction of the City of San Diego. Access to the project site is provided via the surrounding roadway network which includes I-5, SR 75, I-15, East Harbor Drive at the intersection of 28th Street and via East Belt Street to the northwest, and Ward Road to the southeast. The descriptions provide a general understanding of the roadway network and describe the existing setting for transportation.

State Highways

The following state highways are operated and maintained by Caltrans and provide regional access to the project site:

- **I-5** is a north-south freeway that traverses the United States from the Mexican to the Canadian border through the states of California, Oregon, and Washington. Within California, I-5 connects the major metropolitan areas of San Diego, Los Angeles, Sacramento, and the eastern portion of the San Francisco Bay Area. Near the project site, I-5 can be accessed by way of South 28th Street and South 29th Street via Boston Avenue to the north.
- **SR 75** begins as Palm Avenue at I-5 south of the project site, enters the city of Imperial Beach before becoming Silver Strand Boulevard and crossing into Coronado. SR 75 continues onto

Coronado Island and across the San Diego-Coronado Bridge to the north of the project site where it reconnects with I-5.

- **I-15** is a north-south freeway that spans the United States from Southern California to the Canadian border crossing through the states of Nevada, Arizona, Utah, Idaho, and Montana. Within California, I-15 runs north-south between the City of San Diego and Riverside County and southwest-northeast through San Bernadino County. Near the project site, I-15 can be accessed via South 32nd Street.

Roadways

The following roadways provide access to the project site:

- **East Harbor Drive** is a bi-directional four-lane roadway east of the project site. The roadway runs parallel to two separate rail lines: the MTS light rail transit system and a heavy rail freight line. Near the project site, on-street parking is generally permitted on both sides of the roadway. Sidewalks are present on the west side of the roadway but absent from the eastern side. Bike lanes are present on both sides of the roadway within the vicinity of the project site.
- **Belt Street** is a bi-directional two-lane roadway which provides direct access to the project site via Sampson Street. East Belt Street is fronted by parking lots and heavy industrial businesses. Parking is not generally permitted on either side of the roadway. Discontinuous sidewalks are present along the roadway, and bicycle facilities are not present.
- **Ward Road** is a bi-directional two-lane roadway within Naval Base San Diego. Ward Road connects with Belt Street and East Harbor drive southeast of the project site. Although Ward Road does not allow for public use, the roadway could potentially provide access for construction or emergency vehicles.

3.9.2.2 Public Transportation Services

Regional public transportation serving the downtown San Diego area and surrounding communities 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's) adopted *San Diego Forward: The Regional Plan* (Regional Plan), which identifies planned transit improvements that enhance access in the San Diego downtown area and surrounding communities through the year 2050.

Two rail lines serving the MTS San Diego Trolley and freight are located northeast of the NASSCO shipyard. The Harborside Station located at East Harbor Drive and South 28th Street is approximately 800 feet northeast of the project site and is served by the Blue Line Trolley. The Blue Line Trolley runs from the Mexican border to Downtown San Diego and has seven to eight-minute headways during the weekday peak periods. The Mid-Coast Trolley Extension project is anticipated to open in late 2021 extending the Blue Line Trolley north from Downtown San Diego to the University Community area.

Additionally, the following MTS bus routes also serve the project site.

- Route 12 stops at National Avenue and 26th Street, approximately 0.6-mile walking distance from the main entrance to the NASSCO facility.

- Route 929 stops at Main Street and 26th Street, approximately 0.4-mile walking distance from the main entrance to the NASSCO facility.

3.9.2.3 Pedestrian and Bicycle Facilities

The bicycle and pedestrian transportation system in the City of San Diego is composed of local and regional bike lanes, bike paths, and bike routes. Bicycle facilities are classified as follows:

- Class I—off-street bike paths;
- Class II—on-street bike lanes marked by pavement striping;
- Class III—on-street bike routes that share the road with motorized vehicles;
- Bicycle Boulevard—local roads or residential streets that have been enhanced with traffic calming and other treatments to facilitate bicycle travel; and
- Cycle Track—bikeways located in roadway right-of-way but separated from vehicle lanes by physical barriers or buffers.

Pedestrian facilities (sidewalks) are present along all nearby streets in the vicinity of the project site, except for along the eastern side of East Harbor Drive where sidewalks are not present. Intermittent Class II bicycle facilities (i.e., on-street bike lanes) are present along East Harbor Drive.

3.9.2.4 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 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 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).

[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."

- 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.

3.9.3 Applicable Laws, Regulations, Plans, and Policies

3.9.3.1 State

Senate Bill 743

Governor Jerry Brown signed 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 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 promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations. SB 743 indicates that measurements of transportation impacts may include VMT, VMT per capita, automobile trip generation rates, or automobile trips generated. Accordingly, SB 743 required the Governor's Office of Planning and Research (OPR) to amend the State CEQA Guidelines to reflect these changes. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

State CEQA Guidelines Section 15064.3

Section 15064.3 of the State CEQA Guidelines was added as part of a comprehensive update to the guidelines that were adopted by the California Resources Agency in December 2018. Section 15064.3 describes specific considerations for evaluating a project's transportation impacts and identifies vehicle miles traveled as the most appropriate metric for determining impacts. Except for roadway capacity projects, Section 15064.3 stipulates that a project's effect on automobile delay does 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 and are restated below.

Section 15064.3(b)(1) addresses land use projects and describes that projects with specified proximity to "major" or "high quality" transit should be presumed to cause a less than significant transportation impact. As defined in PRC Section 21064.3, a "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. PRC Section 21155(b) defines a high-quality transit corridor as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. Additionally, Section 15064.3(b)(1) also provides that projects resulting in a decrease in VMT in the project area as compared to existing conditions should also be presumed to have a less than significant effect.

Section 15064.3(b)(2) addresses transportation projects. The project would not include transportation improvements; and thus, would not be considered a transportation project. Therefore, this section does not apply to the proposed project.

Section 15064.3(b)(3) (Qualitative Analysis) explains that there may be conditions under which a qualitative rather than quantitative analysis of VMT is appropriate. This section states that if existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may qualitatively analyze VMT generated by a project. Additionally, this section notes that for many projects, a qualitative analysis of construction traffic may be appropriate.

Section 15064.3(b)(4), Methodology, explains that the lead agency has discretion to choose the most appropriate methodology to evaluate VMT subject to other applicable standards such as CEQA Guidelines Section 15151 (standards of adequacy for EIR analyses).

Following the Office of Administrative Law's approval of the updated State CEQA Guidelines, lead agencies had an opt-in period until July 1, 2020 to implement the updated guidelines as they related to VMT. As of July 1, 2020, implementation of Section 15064.3 of the updated CEQA Guidelines apply statewide.

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, OPR adopted the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR Technical Advisory) in December 2018 to provide technical recommendations on methods for assessing VMT, thresholds of significance, and mitigation measures (OPR 2018). The recommendations in the OPR Technical Advisory are intended to provide guidance to agencies and the public for assessing VMT-related transportation impacts under CEQA.

The OPR Technical Advisory states that lead agencies may screen out VMT using project size, maps, transit availability, and provision of affordable housing. Many agencies use these screening thresholds to identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. These screening thresholds are identified below:

- *Small Project* – Projects that generate or attract fewer than 110 trips per day generally may be assumed to result in a less-than-significant transportation impact.
- *Map-Based Screening for Residential and Office Projects* – Residential and office projects located in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Maps created with VMT data, for example from a travel survey or a travel demand model, can illustrate areas that are currently below threshold VMT. Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis.
- *Presumption of Less Than Significant Impact Near Transit Stations* – 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 ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT, unless project-specific or location-specific information indicates that the project would still generate significant levels of VMT.

- *Presumption of Less Than Significant Impact for Affordable Residential Development* – Adding affordable housing to infill locations generally improves jobs-housing match in turn shortening commutes and reducing VMT. Further, low-wage workers in particular would be more likely to choose a residential location close to their workplace if one is available. In areas where existing jobs-housing match is closer to optimal, low-income housing nevertheless generates less VMT than market-rate housing. Therefore, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT.

California Coastal Act

The California Coastal Act, specifically Section 30252, requires new development within the Coastal Zone to maintain and enhance public access to the coast by providing adequate parking facilities or providing substitute means of serving the development with public transportation. In accordance with the California Coastal Act, a significant parking and public access impact would occur if the proposed project would result in an insufficient parking supply that, when considered with other modes of travel (e.g., bicycling, walking, transit use), would reduce the general public's access to the waterfront, as well as coastal commercial and recreational resources.

3.9.3.2 Regional

San Diego Association of Government's *San Diego Forward: The Regional Plan*

The 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 the County government, and aims to provide innovative mobility choices and planning to support a sustainable and healthy region, a vibrant economy, and an outstanding quality of life for all. The Regional Plan integrates 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 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.

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.

Riding to 2050, the San Diego Regional Bike Plan

The San Diego Regional Bike Plan (SANDAG 2010) was developed to support the 2004 Regional Comprehensive Plan and the 2050 RTP in implementing the regional strategy for utilizing the bicycle as a valid form of everyday travel. The bike plan, as a 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 goals for reducing greenhouse gas emissions and improve mobility.

3.9.3.3 Local

The project site is within the land use jurisdiction and control of the District. However, because the streets and intersections serving the project site are within the City's jurisdiction, the following local laws, regulations, and plans were taken into account in the analysis of the proposed project's impacts on transportation and circulation.

City of San Diego Bicycle Master Plan

The City of San Diego Bicycle Master Plan Update provides a framework for making cycling a more practical and convenient transportation option for San Diegans with different riding purposes and at different skill levels (City of San Diego 2013). 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 updating bicycling needs by addressing changes to the bicycle network and overall infrastructure.

City of San Diego Pedestrian Master Plan

The Pedestrian Master Plan provides guidelines to the City that will enhance neighborhood quality and mobility options through the facilitation of pedestrian improvement projects (City of San Diego 2006). The Pedestrian Master Plan both identifies and prioritizes pedestrian improvement projects through technical analysis and community input programs, which are typically grant-funded.

San Diego City Council Resolution R-2019-249

San Diego Municipal Code Section 85.04 authorizes the City Council to prohibit commercial vehicles on designated streets by resolution. In accordance with Municipal Code Section 85.04, the San Diego City Council adopted Resolution R-2019-249 on December 10, 2018, to prohibit commercial vehicles over five tons from designated streets in the Barrio Logan community. The requirement for certain commercial vehicles to use designated truck routes has been in place since 2007; however, revisions were approved by the San Digo City Council through Resolution R-2019-294 to direct truck traffic away from residential uses in the Barrio Logan community by prohibiting commercial vehicles over five tons from using the following streets:

- Main Street between 28th Street and 32nd Street,
- 29th Street between Boston Avenue and Main Street,

- 30th Street between Boston Avenue and Main Street,
- 31st Street between Boston Avenue and Main Street,
- Sigsbee Street between Logan Avenue and Harbor Drive,
- Beardsley Street between Main Street and Harbor Drive, and
- Boston Avenue between 28th Street and 32nd Street, with an exemption for commercial vehicles over five tons but with a height over 13 feet 6 inches.

Individual truck drivers who do not follow the City's regulations are subject to enforcement actions from the San Diego Police Department that can include fines.

3.9.4 Project Impact Analysis

3.9.4.1 Methodology

Section 15064.3 of the State CEQA Guidelines describes specific considerations for evaluating a project's transportation impacts on transportation and identifies VMT as the most appropriate metric for determining the significance of impacts. Except for roadway capacity projects, Section 15064.3 stipulates that a project's effect on automobile delay does not constitute a significant environmental impact under CEQA. As such, in accordance with SB 743, the transportation analysis only uses VMT to determine the significance of transportation and circulation impacts.

Potential transportation and circulation impacts associated with the proposed project are summarized below from Appendix K of this EIR. Methods used to determine impacts are informed by the OPR Technical Advisory. For more details on the methods used, please see Appendix K, Chapter 2, *Analysis Methodology and Threshold*.

Construction

The proposed project involves replacement or repair to the existing floating dry dock, Repair Complex Wharf, revetment along the quay wall, and structural piles associated with berths and piers throughout the NASSCO leasehold. Construction of the various project components is anticipated to begin in 2024 and last through 2034. State CEQA Guidelines Section 15064.3(b)(3) notes that a lead agency may analyze a project's VMT qualitatively if existing models or methods are not available to estimate the VMT for the particular project being considered. State CEQA Guidelines Section 15064.3(b)(3) further notes that a qualitative construction analysis is appropriate for many projects. Accordingly, the analysis of VMT impacts associated with project construction is qualitative.

Operation

Transportation Network VMT Metrics

Project-related VMT refers to the number of automobile trips and their associated travel distance that would be attributable to a project. For land use development projects that have trip-generating characteristics, like an employment trip, the OPR Technical Advisory recommends using VMT/Employee to determine if a project has a significant transportation-related impact.

VMT/Employee includes all vehicle-based person trips grouped and summed to the work location of individuals on the trip. This includes all trips, not just work-related trips. The VMT for each work location is then summed for all work locations in a particular census tract and then divided by the total number of employees of that census tract to arrive at the VMT/Employee.

VMT Analysis Tool

The SANDAG Series 14 Activity Based Model (ABM2+) is a travel demand forecasting model that incorporates census data and travel surveys to inform the algorithms of the model's projections. The ABM2+ uses a simulated population based on existing and projected demographics to match residents to employment and forecasts their daily travel on the regional transportation network. In addition, the model is able to track the daily travel of individuals in the simulated population, including origins, destinations, travel distances, and mode choices. The Series 14 ABM2+ has four forecast scenarios: 2016, 2025, 2035, and 2050.

Additional information regarding the background, data sources, and methodologies used in the Series 14 ABM2+ can be found on SANDAG's website.[3]

Because the project would have no increase in operations, including no change in operational employment, a quantitative VMT analysis is not required.

3.9.4.2 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 on existing transportation, circulation, and parking conditions associated with the proposed project.

Impacts are considered significant if the proposed project would result in any of the following.

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
2. Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b).
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.
5. Result in an insufficient parking supply that would lead to a decrease in public coastal access.

3.9.4.3 Project Impacts and Mitigation Measures

Threshold 1: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Impact Discussion

A significant impact on the circulation system, including transit, roadway, bicycle, and pedestrian facilities would occur if the proposed project would conflict with a program, plan, ordinance, or

[3] https://www.sandag.org/index.asp?subclassid=120&fuseaction=home.subclasshome

policy addressing these facilities. Railroad right-of-way consisting of two rail lines, one serving the MTS San Diego Trolley and the other a freight heavy rail are located just northeast of the project site. Harborside Station which serves the Blue Line Trolley is located approximately 200 feet from the NASSCO shipyard and approximately 800 feet from the delineated project site. Additionally, MTS Bus service is available along Main Street located northeast of East Harbor Drive. The nearest bus stops are located along Main Street at 28th, 27th, and 26th Streets.

Pedestrian facilities, including sidewalks and a pedestrian rail crossing at South 28th Street, are present in the vicinity of the project site and provide access to the Harborside Station. Additionally, intermittent Class II bicycle lanes are located along East Harbor Drive in the vicinity of the project stie.

The project site is within the Harbor Drive Industrial Subarea of Planning District 4 of the certified PMP (San Diego Unified Port District 2020a). SANDAG is currently building the Bayshore Bikeway, 24 miles of continuous bicycle facilities around the San Diego Bay, which includes a Barrio Logan Segment in the vicinity of the project site. The Barrio Logan Segment will be located north of the project site along Harbor Drive from Park Boulevard to 32nd Street. Construction of the Barrio Logan Segment is anticipated to begin in 2022. Additionally, the PMP supports the build out of the Bayshore Bikeway project within the Harbor Drive Industrial area where the project is located (San Diego Unified Port District 2020a:79).

All proposed project improvements are located within the NASSCO shipyard and would not modify any of the existing transportation infrastructure and facilities in the area. Thus, the proposed project would have no direct impact on existing roadway, pedestrian, bicycle, and transit facilities outside of the project site.

Although the proposed project would not result in any direct changes to existing offsite roadway, pedestrian, bicycle, and transit facilities, project construction would involve the use of trucks to transport miscellaneous construction materials and equipment to and from the project site each day. It is anticipated that construction activities associated with material and equipment transport would generate approximately two truck trips per day. These trucks would use the existing roadways surrounding the NASSCO shipyard to access the project construction site. On December 10, 2018, the San Diego City Council adopted Resolution R-2019-294 to prohibit certain commercial vehicles from designated streets in the Barrio Logan community, which is adjacent to the NASSCO shipyard. Specifically, the resolution prohibits commercial trucks over five tons from using the streets specified above in Section 3.9.3.3, “Local.” By prohibiting these specific streets, trucks are required to use Harbor Drive to access north or southbound Interstate 5 or northbound Interstate 15. Throughout project construction, any trucks over five tons would be required to use the City of San Diego-designated truck routes. Compliance is required by law, and individual truck drivers who do not follow the City’s regulations are subject to enforcement actions from the San Diego Police Department. As such, it is assumed that construction-related truck drivers associated with the project would follow these existing regulations and use designated truck routes. Accordingly, given the small number of daily truck trips during construction and mandatory compliance with existing regulations, the proposed project would not conflict with City Resolution R-2019-294. However, to ensure compliance with the City’s designated truck route, as a project best practice, NASSCO will inform all construction contractors of City Resolution R-2019-294 and the designated truck routes it established by providing a truck route and prohibition map as part of the construction bid documents. These project best practices shall also be included as conditions of approval in the CDP.

Moreover, the number of employees that access the NASSCO facilities during operational activities is not anticipated to change with implementation of the project. Therefore, the project would not result in an increase in demand for transportation facilities, resulting in no change related to existing roadway, transit, bicycle, or pedestrian facilities.

Therefore, the project would not conflict with future bicycle or pedestrian improvements identified in the SANDAG's Regional Plan and the San Diego Regional Bike Plan or the City's Pedestrian Master Plan and Bicycle Master Plan. Because the project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, impacts would be less than significant and no mitigation would be required.

Level of Significance Prior to Mitigation

The proposed project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Threshold 2: Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?

Impact Discussion

Construction

The goals of SB 743, as stated in the legislative text, include reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of multimodal transportation systems, and providing clean, efficient access to destinations. The legislative text of SB 743 further states that it is the intent of the Legislature to balance the need for LOS standards for traffic with the need to build infill housing and mixed-use commercial developments within walking distance of mass transit facilities, downtowns, and town centers.

As detailed in Section 2.2.6.2, "Construction Equipment and Workers," approximately 10 construction workers would access the construction site each day over the duration of construction. Additionally, construction activities are anticipated to generate approximately two contractor vehicle truck trips per day to transport miscellaneous material and equipment. The majority of contractor equipment, materials, and personnel would be mobilized and demobilized from the project site via barge or water access.

Project construction activities would be temporary and intermittent in nature; and thus, would not result in long-term increases in vehicular trips. Given the small number of construction workers needed to complete the project, it is anticipated that construction workers would be drawn primarily from existing residents of the City of San Diego and surrounding area. As such, construction worker

VMT associated with the proposed project would not be newly generated, but rather would be redistributed throughout the regional roadway network based on the different work sites to which workers travel to each day. Accordingly, construction worker VMT is merely a redistribution of VMT that would otherwise be generated at other construction sites throughout the San Diego region, and project-related construction activities would not significantly increase VMT in the region.

Therefore, based on the legislative intent of SB 743, which focuses on long-term VMT reductions through land use planning and smart growth, the temporary and limited generation of VMT from the project's construction is not expected to substantially increase VMT in the region such that it could contribute to long-term adverse environmental effects from increases in greenhouse gas and criteria pollutant emissions, or hinder the promotion of multimodal transportation systems or implementation of clean, efficient access to destinations. Additionally, OPR's Technical Advisory advises that SB 743's intent is to plan for "long term climate goals." As such, projects with temporary effects on VMT and the transportation system are not deemed to be significant. Therefore, the proposed project's construction-related VMT impacts would be less than significant.

Operation

The project includes replacement or repair to the floating dry dock, Repair Complex Wharf, quay wall revetment, and structural piles. The repairs and improvements will not expand or add any new facilities or infrastructure within the project site. Therefore, the project is not anticipated to change the daily number of employees that access the NASSCO facilities, nor are they anticipated to increase the number of deliveries, vendors, or other services to the facility. Because no new vehicle trips would be generated during operation of the project, the project would generate fewer than 110 new daily trips. Therefore, the proposed project would not exceed the screening criteria for small projects outlined in the Technical Advisory. VMT impacts associated with project operations would be less than significant.

Additionally, the project would be located approximately 800 feet from the Harborside Station, a stop along the Blue Line Trolley. The Blue Line Trolley, which provides service between the Mexican border and Downtown San Diego, has headways of seven to eight-minute during the morning and afternoon peak commute periods. Therefore, the Harborside Station is considered a major transit stop as defined by PRC Section 21064.3. Pursuant to OPR's Technical Advisory, project would not result in a significant VMT-related impact because it is located within 0.5 mile of an existing major transit stop.

Level of Significance Prior to Mitigation

The proposed project would not conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b). Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Threshold 3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact Discussion

Construction

Vehicles would access the project site from the existing East Harbor Drive. The proposed project does not propose any changes to the existing transportation and circulation infrastructure, and would not create a geometric design feature, such as a sharp curve or dangerous intersection during construction. Moreover, all proposed activities on site would be compatible with existing conditions at the NASSCO leasehold.

Within the NASSCO leasehold, existing available areas at or near the construction site would be utilized for staging or laydown. Construction contractors would park within the limits of the project site in the designated equipment and material staging areas. For these reasons, the project would not substantially increase transportation-related hazards during construction and impacts would be less than significant.

Operation

All improvements and repairs associated with the project would occur to existing facilities within the NASSCO shipyard and would not propose any changes to the existing transportation and circulation infrastructure, including any geometric design features, such as a sharp curve or dangerous intersections. Moreover, all operational activities would remain the same as under existing conditions, and no incompatible use would occur with the project's implementation. Impacts would be less than significant, and no mitigation is required.

Level of Significance Prior to Mitigation

The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). 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: Result in inadequate emergency access?

Impact Discussion

The project would not require the construction, re-design, or alteration of any public roadways and construction activities would occur within the NASSCO facility. No changes to emergency access would occur. NASSCO BMP #102: Emergency Response requires anyone who works at the NASSCO

facility to be aware of how to respond to emergencies, the location of the nearest fire extinguisher, and their evacuation or muster location (NASSCO 2016). Additionally, NASSCO has an onsite fire and emergency response team to respond to medical emergencies. Additionally, the southernmost site access point at the intersection of East Harbor Drive, Belt Street, and Ward Road provides as secondary ingress/egress point and access for emergency services if needed. Therefore, the project would not result in inadequate emergency access. Impacts would be less than significant.

Level of Significance Prior to Mitigation

The proposed project would not result in inadequate emergency access. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Threshold 5: Result in an insufficient parking supply that would lead to a decrease in public coastal access?

Impact Discussion

The project would not result in any changes to existing operations. For this reason, the number of daily employees accessing the site is expected to remain the same, and no additional parking demand is anticipated during operation of the project.

During construction, approximately 10 construction workers would access the project site each day. Therefore, assuming all construction workers arrive at the project site as single occupants of personal vehicles, the parking demand associated with construction activity would be a maximum of 10 parking spaces. As part of the project design, the proposed project would provide parking for construction workers at the designated equipment and material staging areas in the immediate area of the construction site location and, if parking is temporarily unavailable, the construction contractor would use high occupancy vehicles to transport construction workers to and from the construction site from the contractor's office(s). These design features shall be included as conditions of approval in the CDP.

Importantly, the project site and surrounding area within the Harbor Drive Industrial Subarea of Planning District 4 provide waterfront industrial land for marine-oriented businesses. As described in the PMP, the project site is in the Harbor Drive Industrial Subarea, which is encompassed entirely by NASSCO (San Diego Unified Port District 2020a:17). The NASSCO shipyard is located on private land that is not accessible to the public. Moreover, due to safety and security reasons, existing shipyards and the nearby Naval Base San Diego prevent access to the waterfront within the vicinity of the project. Therefore, public coastal access would not be affected and would not decrease due to any changes to the existing parking supply.

Level of Significance Prior to Mitigation

Implementation of the proposed project would not result in insufficient parking supply that would lead to a decrease in public coastal access. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

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Chapter 4
Cumulative Impacts

4.1 Overview

According to Section 15130 of the State CEQA Guidelines, an EIR must discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable. As defined in Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. *Cumulatively considerable* means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

This chapter considers the cumulative effects of past, present, and probable future projects and the proposed project's contribution to these effects. Past projects are defined as those that were recently completed (typically in the last 5 years) and are now operational. Present projects are defined as those that are under construction but not yet operational. Probable future projects are defined as those for which a development application has been submitted or credible information is available to suggest that project development is a probable outcome at the time the Notice of Preparation (NOP) for this EIR was issued (January 23, 2023).

As discussed in this chapter, the proposed project would not result in a cumulatively considerable contribution to any cumulatively significant impacts. Therefore, aside from mitigation identified in Chapter 3, *Environmental Impact Analysis*, and which is summarized below, no additional mitigation is required to address a cumulatively considerable impact.

4.2 Cumulative Impact Analysis Methodology

According to Section 15130(b) of the State CEQA Guidelines, cumulative impact analysis may be conducted using one of two methods: the List Method, which includes "a list of past, present, and probable activities producing related or cumulative impacts"; or the Plan Method, which uses "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact." The cumulative analysis of near-term conditions for all issue areas uses the List Method.

The process of analyzing cumulative impacts first involves understanding the context of the cumulative conditions for each resource area. This involves determining the area of effect, or study area, within which past, present, and probable future projects, along with the proposed project, have the potential to contribute to cumulative impacts. Generally, the geographic scope of the area affected by cumulative effects varies according to the issue area. The study area for each issue area is described further under the respective resource headings. An analysis of the significance of the cumulative effect from past, present, and probable projects is conducted, which may be a qualitative analysis, or a deduction may be made based on relevant environmental documentation and studies. In the event a significant cumulative effect is identified, the proposed project's incremental

contribution to that cumulative effect must be analyzed. The project's individual impacts are assessed in the context of the cumulative impacts from past, present, and probable future projects to determine if the project impacts are "cumulatively considerable" based on the project's magnitude of contribution to the cumulative context or baseline. If it is determined that the proposed project's contribution to the significant cumulative effect is considerable, the project's contribution would be considered significant, and mitigation would be imposed.

4.2.1.1 Cumulative Projects List

The District has identified 32 cumulative projects for this analysis. The projects identified in the proposed project's cumulative study area have had applications submitted or have been approved, are under construction, or have recently been completed. The cumulative projects identified in the study area are listed in Table 4-1.

Table 4-1. Past, Present, and Probable Cumulative Projects

Project #	Name	Location	Description	Status
1	San Diego Continuing Education – Cesar Chavez Campus	Intersection of National Avenue and Cesar E. Chavez Parkway	New Cesar E. Chavez Campus is a 67,924-square-foot school facility with 22 classrooms to serve 720 students. The facility includes a multi-purpose room and administrative offices.	Completed.
2	BAE Systems-Pier 1 North Drydock, Associated Real Estate Agreements and Removal of Cooling Tunnels Project	2205 East Belt Street	Replacement of a wet berth with a new floating drydock and removal of subsurface cooling tunnels. Dredging activities were estimated to result in approximately 395,000 cubic yards of sediment.	Completed.
3	Shipyard Sediment Remediation Project	San Diego Bay between Sampson Street extension to the north and Schley Street to the south from the shoreline to the U.S. Pierhead Line to the west and a portion of British Aerospace Systems facility, San Diego, CA 92113	Consisted of the dredging of sediment adjacent to shipyards in the San Diego Bay, the dewatering and solidification of the dredged material on-shore, treatment of decanted water, and the transport of the removed material to an appropriate landfill for disposal.	Completed, subject to post-remediation monitoring.
4	Naval Base Point Loma Fuel Pier (P151) Replacement and Dredging	Naval Station Point Loma and Alternative Bait Barge locations within state lands, San Diego, CA	Temporary Space and Naval Warfare Systems Center (SSC) marine mammal facilities at Naval Main and Anti-Submarine Warfare Command (NMAWC) and	Completed.

Project #	Name	Location	Description	Status
			relocation of the program to NMAWC; demolished existing Naval Base Point Loma Fuel Pier in phases so as to leave pier operational throughout project; constructed 71,180-square-foot double-deck replacement pier and performed associated dredging; returned SSC marine mammal program to original location.	
5	Pier 12 Replacement and Dredging at Naval Base San Diego	Pier 12 at Naval Base San Diego	Demolition of an inadequate existing pier (Pier 12); dredging in berthing and approach areas for a new pier; dredged material disposal at an approved ocean disposal site and permitted upland landfill; construction of a new pier and associated pier utilities, including upgrades to the electrical infrastructure at the adjacent Pier 13; and reuse of demolition concrete to create fish enhancement structures (artificial reefs). The purpose of the project was to address the current and impending shortfall at Naval Base San Diego of pier infrastructure necessary to support modern Navy ship classes with deep draft-power intensive or power intensive requirements.	Completed.
6	Cold Ironing Phase 2 at B Street and Broadway Pier	B Street Pier and Broadway Pier, 1140 and 1000 North Harbor Drive	Infrastructure components to provide shore power to existing terminal operations at the B Street and Broadway Piers (three berths) to reduce air pollutant emissions and greenhouse gas emissions while cruise ships are berthed. Initially, shore power will be available to one ship at a time; in subsequent years, two ships will be able to use shore power at the same time.	Completed.

Project #	Name	Location	Description	Status
7	Pier 8 Replacement Naval Base San Diego	Pier 8 at Naval Base San Diego	Demolition of the inadequate existing Pier 8, construction of a replacement Pier 8, and provision of associated pier utilities. The purpose of the proposed action is to address the current and impending shortfall at Naval Base San Diego of pier infrastructure necessary to support modern Navy ship classes with deep-draft and power-intensive requirements.	Under construction.
8	Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component Project	686 Switzer Street	Program- and project-level EIR analysis. The program component looks at Maximum Practical Capacity of three distinct cargo nodes (e.g., Refrigerated Container, Neo-bulk/Break Bulk, Dry Bulk) to the horizon year of 2035. Long-term infrastructure investments may include up to five gantry cranes, additional and consolidated dry bulk storage capacity, enhancements to the existing conveyor system, demolition of molasses tanks and Warehouse C, additional open storage space, and on-dock intermodal rail facilities. Project-level improvements would be completed by June 30, 2020, and involve demolition of two transit sheds, installation of a small gear-shack with restrooms and outdoor storage space, and on terminal rail upgrades. Project improvements do not involve any in-water work; all program- and project-level improvements would be landside.	Under construction.
9	Portside Pier Restaurant Redevelopment Project	1360 North Harbor Drive	Redevelopment of an existing waterfront restaurant with a new facility, including new pilings, piers, decking, and structure. Development	Completed July 2020.

Project #	Name	Location	Description	Status
			involves demolition of an existing restaurant and supporting structure (including 66 piles) and redevelopment with a new, two-story restaurant and supporting structure (on 53 piles). The new facility would be approximately 33,577 square feet and include three distinct dining establishments, a coffee and gelato shop, an expanded dock-and-dine for short-term boat berthing, and a public viewing deck. The project would involve an approximately 8,722-square-foot increase in building floor area and a 4,480-square-foot net increase in water coverage. Restaurant seating would be increased by 464 seats. A new public viewing deck with approximately 108 seats is proposed and the replacement dock and dine boat dock would allow an increase in boat slips from 2 to 12; however, 4 would be constructed initially.	
10	B Street Pier Cruise Ship Terminal Maintenance Projects	B Street Pier, 1140 North Harbor Drive	Projects on B Street Pier required to address routine maintenance requirements to improve safety, security, integrity, aesthetics, and comfort of this facility. Roof replacement, roll-up and rolling gate doors installation, fire system upgrades, ceiling and hangers cleaning and painting, mobile gangway and platform painting, and installation of photovoltaic system.	Completed.
11	B Street Mooring Dolphin Project	B Street Pier, 1140 North Harbor Drive	Proposal to install moorings off the end of B Street Pier to allow for larger cruise ship docking.	Draft EIR was circulated February 2013. The Final EIR has not yet been certified. Project on hold.

Project #	Name	Location	Description	Status
12	Port Master Plan Update (PMPU)	Throughout District tidelands	Major update of the Port Master Plan that is anticipated to include new topical sections, or elements, to provide Baywide guidance related to Land and Water Use, Coastal Access and Recreation, Mobility, Natural Resources, Safety and Resiliency, and Economic Development.	The Draft Program EIR was released for public review in November 2021 and preparation of the Final Program EIR is currently in progress.
13	Metro Center Project	West side of National Avenue between Commercial and 16th Streets	Consists of 160,600 square feet of regional shopping center uses, 163,300 square feet of retail space, and a 152,000-square-foot lumber store.	Foreseeable project, not entitled.
14	Harbor Island West Marina Redevelopment	2040 Harbor Island Drive, San Diego, CA 92101	Involves demolition of 23,000 square feet of existing building and construction of 15,000 square feet of new office, deli, and retail, as well as reconfiguration of an existing marina. The project would construct a new 12-foot-wide public promenade and reduce the number of boat slips from 620 to 603.	Foreseeable project, not entitled. Draft Mitigated Negative Declaration (MND) released December 2019.
15	Lockheed Martin Harbor Island Facilities Demolition and Sediment Remediation Project	1160 Harbor Island Drive, San Diego, CA 92101	Involves demolition of 5,500 square feet of building and removal of a pier and trolley rail.	Final EIR certified December 2020. Phase 1 of construction complete.
16	National City Bayfront Projects and Plan Amendments	Generally north of Sweetwater Channel, south of Civic Center Drive, east of National City Marine Terminal, and west of Paradise Marsh and Interstate 5, National City, CA 91950	Includes several landside and waterside improvements, including a recreational vehicle park, modular cabins, dry boat storage, hotels, an expanded marina, a rail connector track and storage track, road closures, Segment 5 of the Bayshore Bikeway, restaurants, and retail development. The project also includes corresponding amendments to the District's Port Master Plan and the City of National City's General Plan, Local Coastal Program,	Final EIR certified November 2022. PMPA to be processed by Coastal Commission in 2023.

Project #	Name	Location	Description	Status
			Harbor District Specific Area Plan, Land Use Code, and Bicycle Master Plan.	
17	Central Embarcadero Redevelopment – Seaport San Diego Project	Generally south of the USS Midway Museum and Harbor Drive, west of the Manchester Grand Hyatt and Kettner Boulevard, and north and east of San Diego Bay, San Diego, CA 92101	Includes redevelopment of approximately 70 acres of land and water and includes uses such as: parks, open spaces and plazas, piers, walkways, beaches, nature trails, shared streets, and public rooftop; restaurants and retail; hotels at various service levels and price points; an event center; a "Blue Tech Innovation Center" block made up of an aquarium, blue tech office space, and an observation tower; and commercial fishing facilities.	Foreseeable project, not entitled. Board authorized staff to commence environmental review in November 2022.
18	Continental Maritime of San Diego Marginal Wharf Repair and As-Needed Pile Replacement Project	1995 Bay Front Street, San Diego, California	Involves two components consisting of demolition, reconstruction, and reconfiguration of piers and wharves. Component 1 is the replacement of three wharves that have severely deteriorated. Component 2 includes the demolition of one pier and the as-needed pile replacement of the remaining five piers. The updated project would involve structural repairs of the existing quay wall; removal and improvement of Pier 4/Wharf 4 Deck; and the removal of the deteriorated Piers 1, 5, and 7.	Construction of the original project under the 2019 MND is complete. Additional project components were analyzed under an addendum to the 2019 MND and adopted by the Board on September 13, 2022.
19	Redevelopment of the Elbow Parcel on East Harbor Island	7-acre parcel of land north of the East Basin Industrial Subarea in the current PMP known as the Elbow Parcel	Involves an approximately 450-room hotel with other amenities including swimming pools, spas, gym, retail shops, open space event lawn, and a viewing deck.	Addendum to the Revised FEIR adopted in April 2021.
20	Bayside Performance Park Enhancement Project	Embarcadero Marina Park South (EMPS)	Involves the replacement and enhancement of structures in EMPS and new facilities including the Bayside Performance Park, a new performance and event	Final EIR certified on January 9, 2018. Construction completed.

Project #	Name	Location	Description	Status
			venue to hold up to 10,000 attendees and various other park improvements.	
21	3121 Boston Avenue Duplex – Project 409094	3121 Boston Avenue	Includes a 2,535-square-foot residential duplex on a 7,704 square-foot site that contains an existing 1,892-square-foot residential duplex.	Unknown. The CDP was issued in September 2015.
22	Workshop for Warriors CDP/SDP – Project 528711	2984, 2970, 2960, 2948, 2940 Main Street	Includes an 89,000-square-foot warehouse/ trade school/ roof deck and parking, within 1.28 acres.	Unknown.
23	Boston Commons – Project 176117	2893 Boston Avenue	Involves five affordable residential units for rent on a 0.24-acre site.	Unknown.
24	The Barrio Flats NDP/CDP – Project 541700	2257–2275 Logan Avenue	Involves the demolition of existing buildings and construction of a new 38,375-square-foot, four story, mixed-use building that would include: 24 residential units, 10 hotel rooms, and 5 retail spaces. The existing building on the 0.41-acre site would remain.	Final MND released July 2019. The SDP/CDP was issued in October 2019.
25	U-Stor-It – CDP – Project 586276	2209 National Avenue	Involves the demolition of an existing commercial building within the 0.807-acre site, for the development of a new three-story 68,878-square-foot self-storage building over two levels, and 90,297 square feet of underground basement.	Unknown. The CDP was issued in November 2018.
26	Family Counseling Center CDP – Project 490726	2130, 2134, and 2142 National Avenue	Involves the demolition of two single dwelling units and one commercial building located on three contiguous lots consisting of 0.34 acre. Includes the construction of a two-story family counseling center facility totaling 8,129 square feet.	Unknown. The CDP was issued in December 2016.
27	2142 Logan Avenue SDP/CDP – Project 585277	2142 Logan Avenue	Involves a mixed-use building to include 11 artist studios, retail sales, offices, and gallery spaces within the 0.10-acre site.	Final ND released December 2018. The SDP/CDP was issued in March 2019.
28	BAE Systems Waterfront Improvement	2205 E Belt Street	Involves the maintenance, repair, and replacement project for waterfront	Final EIR certified by the Board in February 2022.

Project #	Name	Location	Description	Status
	Project		infrastructure associated with mooring and operational facilities on approximately 35.9 acres within the BAE Systems San Diego Ship Repair Yard	
29	Redevelopment of a Portion of East Harbor Island by Topgolf USA SDP, LLC	Approximately 8.5-acre project site located in the East Basin Industrial Subarea	Involves a 70,700 square foot three-story entertainment building and addition of 293 public parking spaces. The first floor offers a grand welcoming concourse, a bar, an outdoor patio space, and office space. The second floor offers a bar and seating area, full-service kitchen, an outdoor patio, and a private event space. The third floor offers a bar and seating area, a unique "sky patio" and multiple private event spaces that can be combined for one large multiple use event space.	Board authorized staff to commence environmental review in December 2022.
30	San Diego International Airport's (SDIA) Airport Development Plan (ADP)	3225 N Harbor Drive, San Diego, CA 92101	Involves the replacement of the existing T1, modifications to T2, a new administrative building, and a new airport access roadway, with new bicycle and pedestrian infrastructure. As part of the T1 replacement, a new T1 access road and parking structure would be constructed. Other improvements include infrastructure upgrades and the removal/relocation of other airport support facilities to accommodate the terminal improvements. Ultimately, the number of gates at SDIA would increase from 51 to 61. Implementation of the proposed project would occur over two phases (Phase 1 and Phase 2), each would two sub-phases (Phase 1a and Phase 1b, and Phase 2a and Phase 2b).	The Airport Authority Board certified the Final EIR on January 9, 2020.

Project #	Name	Location	Description	Status
31	Manchester Pacific Gateway Project	N Harbor Drive, San Diego, CA 92132	The Research and Development District (RaDD) is downtown San Diego's newest life science mixed-use development. Sitting on 8 acres and occupying 6 city blocks, San Diego's RaDD will represent the largest urban commercial waterfront site along California's Pacific coast. This campus will feature a mix of mid-rise buildings, a 17-story tower, ground-floor retail, restaurants, and a public paseo, all activated by roof decks and green space.	City of San Diego certified the Final EIR for the Navy Broadway Complex Project in October 1992. Board adopted the Findings of Fact, Mitigation Monitoring Program, the Statement of Overriding Considerations, and authorized staff to file the Notice of Determination in January 2017. The Project is a "federal" project located outside of the Coastal Zone that has received all necessary approvals under the Coastal Zone Management Act (CZMA) through the consistency determination process, as set forth in the California Coastal Management Plan (CCMP), involving the August 1990 Navy Coastal Consistency Determination.
32	Resort Hotel and Convention Center, Parking, Infrastructure and Phase 1A Improvements	Parcels H-3, H-8, H-23, HP-1, HP-3A, HW-4, HW-6 on E and H Streets, Chula Vista, CA 91910 (Harbor District of the Chula Vista Bayfront)	RIDA Chula Vista, LLC proposes to construct a resort hotel and convention center ("RHCC") on parcel H-3, involving construction staging and laydown areas on parcels H-9 and H-23, parking, and infrastructure improvements. The RHCC would involve a 1,570-room hotel, 718,706 square foot convention center, 340-foot area of various on-site amenities, and new public esplanade at the Chula Vista Bayfront.	Final EIR certified by the Board in May 2010. The CDP was issued in June 2019. Construction began in July 2022.

4.3 Cumulative Impact Analysis

The discussion below evaluates the potential for the proposed project to contribute to a cumulative adverse impact on the environment. For each resource area, an introductory statement is made regarding what would constitute a significant cumulative impact for a particular resource area.

The analysis that follows considers two separate impacts: (1) the significance of the cumulative effect from past, present, and probable projects; and (2) in the event a significant cumulative effect is identified, the proposed project's incremental contribution to that cumulative effect.

According to Section 15130 (a)(1) of the State CEQA Guidelines, an EIR should not discuss impacts that do not result in part from the project evaluated in the EIR. Based on the analysis provided in the Initial Study/Environmental Checklist (Appendix C of this Draft EIR), it was determined that the proposed project would not result in any impacts on aesthetics and visual resources, agriculture and forestry resources, cultural resources, mineral resources, population and housing, public services, recreation, tribal cultural resources, or utilities and service systems. Consequently, the proposed project would not have a potential to contribute to cumulative impacts related to these resources, and they are not discussed in the cumulative impact analysis below. Therefore, the cumulative analysis that follows addresses the incremental contribution of the proposed project to cumulative impacts associated with air quality and health risk; biological resources; geology and soils; greenhouse gas emissions and energy; hazards and hazardous materials; hydrology and water quality; land use and planning; noise and vibration; and transportation, circulation, and parking.

4.3.1 Air Quality and Health Risk

Potential cumulative air quality impacts would result when cumulative projects' emissions would combine to degrade air quality conditions below attainment levels for the San Diego Air Basin (SDAB), delay attainment of air quality standards, affect sensitive receptors, or subject surrounding areas to objectionable odors. The District has not established quantitative thresholds to determine whether a project's incremental contribution to emissions would be cumulatively considerable. The San Diego Air Pollution Control District (SDAPCD) does not provide specific quantitative thresholds for determining the significance of air quality impacts under CEQA. However, the SDAPCD specifies Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources in SDAPCD Rules 20.2 and 20.3. Additionally, the County of San Diego specifies screening level thresholds (SLTs) for cumulative air quality impacts, which are based on the SDAPCD Rules 20.1 and 20.3, and are used for the analysis of impacts related to emissions for proposed project construction and operations evaluated within the context of past, present, and probable future projects. The substantial evidence for using the County's and SDAPCD's threshold levels for this project is contained within Section 3.1, *Air Quality and Health Risk*, under Section 3.1.4.2, *Thresholds of Significance*, of this Draft EIR.

4.3.1.1 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. 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), recommend analyzing the effects of emissions from sources within 1,000 feet of proposed new emission sources or proposed new receptor locations.

4.3.1.2 Cumulative Effects

Past projects within the SDAB have involved the emissions of ozone precursors (reactive organic gases [ROG] or volatile organic compounds [VOC] and nitrogen oxides [NO_X]), particulate matter 10 microns or less in diameter (PM_{10}), and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), resulting in nonattainment status for 8-hour ozone under National Ambient Air Quality Standards (NAAQS) and nonattainment status for ozone, PM_{10}, and $PM_{2.5}$ under California Ambient Air Quality Standards (CAAQS). Therefore, the emissions of concern within the SDAB are ozone precursors (ROG and NO_X), PM_{10}, and $PM_{2.5}$.

The nonattainment status for the entire County is a consequence of past and present projects; the cumulative contribution of probable future projects, such as those listed in Table 4-1, could result in continued nonattainment. The probable future projects within 1,000 feet of the proposed project that could contribute cumulative impacts on localized air quality conditions generally include the following: Continental Maritime of San Diego Shipyard Marginal Wharf Repair and As-Needed Pile Replacement Project (Cumulative Project #18) and the BAE Systems Waterfront Improvement Project (Cumulative Project #28). Construction of one or both of these projects would potentially overlap with the construction of the proposed project, which is scheduled to occur through 2028, with periodic Structural Pile Repair and Replacement work lasting through 2034. Because past and present projects have resulted in the current nonattainment status for ozone (ROG and NO_X), PM_{10}, and $PM_{2.5}$, and probable future projects would continue to contribute to the nonattainment status and potentially affect sensitive receptors, impacts related to the cumulative contribution of nonattainment pollutants (ozone precursors, PM_{10}, and $PM_{2.5}$) and the exposure of sensitive receptors to substantial pollutant concentrations would be considered cumulatively significant.

4.3.1.3 Project Contribution

As discussed under Threshold 1 of Section 3.1, the project does not propose any new land uses and is therefore deemed consistent with the most recent Regional Air Quality Strategy (RAQS) and State Implementation Plan (SIP), which are designed to bring the SDAB into attainment status for state and federal ozone standards. Therefore, although there is a cumulative impact from past, present, and probable future projects resulting in nonattainment status for some criteria pollutants in the air basin, the proposed project's incremental contribution to cumulative air emissions would not conflict with progress toward attainment of the air quality standards described in the RAQS and SIP.

As discussed under Threshold 2 of Section 3.1 and shown in Table 3.1-10, construction of the proposed project would contribute emissions to the cumulative condition. However, emissions would be below thresholds for all pollutants during concurrent construction activity. As discussed in Section 3.1, thresholds are designed to be health-protective and are thus both project level and cumulative in nature. Accordingly, while the effects from past, present, and probable future projects are considered cumulatively significant, the proposed project's incremental contribution from construction emissions would be less than cumulatively considerable.

As discussed under Threshold 2 of Section 3.1, the project would not change the nature of existing operations at the project site, and thus, the proposed project would not result in any increase in operational-related emissions. As with the construction phase, the effects from past, present, and probable future projects are considered cumulatively significant, but the proposed project's incremental contribution from operational emissions would not result in a net increase in nonattainment pollutants as the project would not result in any increase in emissions from existing operations and emissions would not exceed thresholds that are designed to assess both project level and cumulative effects. Consequently, the proposed project's incremental contribution to cumulative air quality impacts during its operational stage would be less than cumulatively considerable.

As discussed under Threshold 3 of Section 3.1, neither construction nor operation of the proposed project would expose sensitive receptor locations to substantial toxic air contaminant concentrations, including diesel particulate matter and asbestos-containing materials. Similarly, additional traffic created by the proposed project would not result in carbon monoxide concentrations in excess of the NAAQS or CAAQS. Odors emitted during construction and operation would likewise not result in nuisance odors that would violate SDAPCD Rule 51 (see Threshold 4 in Section 3.1). Accordingly, while the effects from past, present, and probable future projects are considered cumulatively significant, the proposed project's incremental contribution to cumulative health risks and odor emissions would be less than cumulatively considerable.

4.3.1.4 Cumulative Impact Determination and Mitigation

The proposed project's incremental contribution to cumulative air quality impacts would not be cumulatively considerable and would be less than significant. No cumulative impact specific mitigation is required.

4.3.2 Biological Resources

A significant cumulative impact on biological resources would occur if the proposed project would contribute to cumulatively considerable 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.

4.3.2.1 Geographic Scope

The geographic scope for cumulative impacts on terrestrial biological resources includes the surrounding downtown area, embarcadero and waterfront, and Tenth Avenue Marine Terminal. The geographic scope for cumulative marine biological resources impacts is limited to areas adjacent to, or otherwise linked to, the San Diego Bay. Past, present, and probable future projects that could contribute to cumulative impacts on terrestrial biological resources include projects with grading, paving, landscaping, road, and building construction of undeveloped land or land containing habitat. Marine organisms could be directly affected by construction and/or operation activities in or along the water, including dredging, filling, pile-driving, 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 on marine biological resources.

4.3.2.2 Cumulative Effects

Past development projects have changed the land in and around San Diego Bay and surrounding Downtown San Diego 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 projects identified in Table 4-1, 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, open water of the San Diego Bay could provide foraging habitat, and trees and even structures may provide nesting habitat for avian species.

Present and future cumulative projects would be required to be consistent with the City's Multiple Species Conservation Program Subarea Plan (if within the City's jurisdiction) or the Port of San Diego's and U.S. Navy's Integrated Natural Resources Management Plan (if within the District's jurisdiction), which identify important sensitive species and habitats in San Diego and San Diego Bay, respectively. Moreover, present and future projects also would comply with requirements of the Federal and State Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Marine Mammal Protection Act (MMPA), which contains regulations for the take of any listed species, migratory birds and raptors, and marine mammals, and would require that present and future projects avoid and/or mitigate potential impacts on any nesting birds.

In addition, present and probable future projects have the potential to further degrade water quality within San Diego Bay as well as existing marine habitat. However, specific regulations are in place that would minimize continued degradation of water quality and existing marine habitat of San Diego Bay. These include the Clean Water Act (CWA) regulations that require compliance with water quality standards, including state and local water quality regulations, and the District's Jurisdictional Runoff Management Plan (JRMP) and *BMP Design Manual* (for projects within the District's jurisdiction) and City of San Diego's Storm Water Management and Discharge Control Ordinance, which identifies water quality best management practices (BMP) requirements (for projects within the City's jurisdiction). Under these regulations, projects over 1 acre in size are required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the NPDES Construction General Permit, while projects smaller than 1 acre are still required to comply with the City of San Diego's water quality regulations and the District's JRMP, depending on the jurisdiction within 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 stormwater runoff.

Moreover, construction of present and future projects that involve in-water work such as pile driving have the potential to cause hydroacoustic impacts on fishes, green sea turtles, and marine mammals. However, all present and future projects would be required to mitigate for these impacts, which could include mitigation measures such as surveying for the presence of marine special-status species and

monitoring programs to reduce potential impacts during in-water construction. Several of the cumulative projects listed in Table 4-1 propose in-water work, such as dredging, fill, or pile-driving.

In addition, marinas, piers, and other structures currently exist throughout the 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 San Diego Bay, and could also affect the water quality of the Bay, 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 and California brown pelican to identify prey. However, all present and 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 considered significant.

4.3.2.3 Project Contribution

The project site is situated in a highly industrialized area on and adjacent to the San Diego Bay. The terrestrial portion of the project site is completely developed and contains no natural habitat, natural vegetation, or landscape vegetation. As discussed in Section 3.2, project construction would involve in-water activities that would generate underwater noise and increase turbidity. In addition, new overwater structures would increase shading. The project has potential to result in direct and indirect effects on eelgrass habitat and aquatic wildlife if they were to be present in the project site. BMPs would be implemented to comply with regulations and permit conditions imposed by the US Army Corps of Engineers, Regional Water Quality Control Board, and other regulatory agencies. However, the project could still result in the harassment or behavioral disruption of aquatic species, loss of eelgrass habitat, disturbance of sediments and increased turbidity in the San Diego Bay, and a net increase in fill within the Bay. Therefore, the project has potential to result in cumulatively considerable impacts related to biological resources. Mitigation measures **MM-BIO-1** through **MM-BIO-7**, as described in Section 3.2, as well as **MM-WQ-1** and **MM-WQ-2** (as discussed in Section 3.6, *Hydrology and Water Quality*), and **MM-HAZ-1** through **MM-HAZ-10** (as discussed in Section 3.5, *Hazards and Hazardous Materials*), would be implemented to ensure that potential impacts associated with biological resources would be less than significant.

4.3.2.4 Cumulative Impact Determination and Mitigation

The proposed project's incremental contribution to cumulative biological resource impacts would be cumulatively considerable prior to mitigation identified in Section 3.2, *Biological Resources*.

No additional cumulative impact specific mitigation would be required. However, the project would be required to implement **MM-BIO-1** through **MM-BIO-7**, as described in Section 3.2, *Biological*

Resources, **MM-WQ-1** and **MM-WQ-2,** as discussed in Section 3.6, *Hydrology and Water Quality*, and **MM-HAZ-1** through **MM-HAZ-10,** as discussed in Section 3.5, *Hazards and Hazardous Materials.*

Based on the above discussion, the project, in combination with past, present, and probable future projects, could contribute to cumulative effects related to biological resources. However, with mitigation incorporated, the project's cumulative contribution would be less than cumulatively considerable because it would not result in a net loss of sensitive habitat, a net increase in fill, nor a significant impact on a protected species. In addition, the project's contribution to cumulative impacts would occur only during construction and not during the continuation of existing operations. Therefore, the proposed project's contribution to cumulative impacts related to biological resources would not be cumulatively considerable and no additional mitigation specific to cumulative impacts would be required.

4.3.3 Climate Change, Greenhouse Gas Emissions, and Energy

There would be the potential for a cumulatively considerable greenhouse gas (GHG)-related impact if the project would generate GHG emissions that, directly or indirectly, may have a significant effect on the environment or be inconsistent with the District's Climate Action Plan (CAP), as well as regulatory programs and GHG emissions reduction planning efforts outlined by the California Air Resources Board (CARB) in the 2022 Scoping Plan. Additionally, there would be the potential for a cumulatively considerable energy use–related impact if the project would contribute to a cumulatively significant impact related to the wasteful, inefficient, and unnecessary usage of energy, either directly or indirectly.

4.3.3.1 Geographic Scope

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. GHGs are emitted by innumerable sources worldwide, and therefore, 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. The GHG analysis within Section 3.3, *Climate Change, Greenhouse Gas Emissions and Energy*, is inherently a cumulative analysis. However, a summary of the discussion is provided below. Energy use is a regional issue, and the geographic scope includes the service area of San Diego Gas and Electric (SDG&E).

4.3.3.2 Cumulative Effects

Past, present, and probable future projects throughout the region, state, nation, and world, including, but not limited to those projects listed in Table 4-1, have contributed to, and will continue to contribute to, the cumulative impacts of GHG emissions. As with the proposed project, all the projects in Table 4-1, along with all other projects within the county, region, and state, would be required to comply with all applicable federal, state, and local policies and regulations regarding GHG emission reductions (e.g., Senate Bill 32, the Scoping Plan). However, changes from past, present, and probable future projects have contributed to, and will continue to contribute to, a cumulatively significant GHG impact in the project vicinity.

4.3.3.3 Project Contribution

As discussed under Threshold 1 of Section 3.3, *Climate Change, Greenhouse Gas Emissions, and Energy*, the proposed project would contribute GHG emissions to the cumulative condition. As shown in Tables 3.3-6 in Section 3.3, equipment and vehicles used during construction (e.g., on-road motor vehicles, vessels, and heavy equipment) would result in a net increase in GHG emissions over existing conditions. Once constructed, operation of the project site would be more efficient, thereby reducing energy demand and fuel consumption over the life of the project. Additionally, as discussed under Threshold 2 of Section 3.3, the proposed project would be consistent with GHG reduction goals and efficiency requirements of the District's CAP, as well as statewide planning efforts, and would not result in a permanent increase in GHG emissions.

As discussed under Threshold 3 of Section 3.3, implementation of the proposed project would also not result in the wasteful, inefficient, and unnecessary consumption of energy, nor would project construction or operation conflict with or obstruct any applicable renewable energy or energy efficiency plans. As such, the proposed project's contribution to cumulative impacts on energy would not be cumulatively considerable.

4.3.3.4 Cumulative Impact Determination and Mitigation

The proposed project's incremental contribution to cumulative impacts related to GHG emissions and reduction targets and plans would be less than cumulatively considerable. No cumulative impact specific mitigation is required.

4.3.4 Geology and Soils

A significant cumulative impact on geology and soils would result if the project would contribute to cumulative impacts related to exacerbating the potential for strong seismic ground shaking, seismic-related ground failure, and geologic unit or soil instability.

The proposed project would have no impacts related to earthquake fault rupture and landslides, soil erosion or loss of topsoil, soils and septic tanks, alternative wastewater disposal systems, or paleontological resources and unique geologic features. Therefore, the proposed project would not make any additional contribution to any of these related cumulative impacts.

4.3.4.1 Geographic Scope

The geographic context for geology and soils impacts is generally site-specific, rather than cumulative in nature. Each development site has unique geologic considerations that would be subject to uniform site development and construction standards. Therefore, the cumulative study area for geology and soils includes all areas within the project site where ground disturbing activities would occur. As described in Section 3.4, *Geology and Soils*, geologic hazards associated with the cumulative study area include seismic ground shaking, liquefaction, lateral spreading, and seismic-induced slope instability.

4.3.4.2 Cumulative Effects

The cumulative projects identified in Table 4-1 includes past, present, and probable future projects in the vicinity of the project area. None of the cumulative projects are located within the cumulative study area, which is limited to all areas within the project site where ground disturbing activities

would occur. Regardless, if any future projects were to occur in the cumulative study area, these projects would be required to follow applicable engineering regulations and best practices to prevent geologic hazards from occurring. Therefore, none of past, present, and probable future projects would contribute to a cumulative impact related to geology and soils.

4.3.4.3 Project Contribution

As discussed in Section 3.4, *Geology and Soils*, project components would not occur on the landside portion of the project site. In addition, the project would be designed and constructed in accordance with the recommendations in the *Geotechnical Investigation* (Appendix I) that address geologic hazards and soil instability. The *Geotechnical Investigation* provides recommendations for pile installation methods; slope inclination; pile capacity, including lateral load capacities for vertical piles; and sheet-pile bulkhead lateral pressures, which would provide structure stability and security and would not worsen the existing conditions (refer to Attachment D for additional information). Site-specific design and construction recommendations were not provided for the as-needed 1,500 linear feet of shoreline repairs (from Lot 20 to Pier 12, the floating dry dock approach pier to Berth 8, Ways to Building Dock, and Berth 6 to Navy Base quay wall) because geologic conditions were not specifically evaluated in that area. However, the *Geotechnical Investigation* evaluated shoreline repairs between Berths 2 and 6 and similar conditions are anticipated along the quay walls throughout the entire NASSCO leasehold. Regardless, NASSCO would be required to prepare a geotechnical investigation prior to commencing any as-needed shoreline repairs to ensure that all structures are engineered to specifications based on site-specific geotechnical conditions (**MM-GEO-1**). Implementation of **MM-GEO-1** would ensure that the project design complies with all structural laws and best practices, thus ensuring that all project impacts related to strong seismic ground shaking, seismic-related ground failure, and geologic unit or soil instability would be less than significant.

When combined with the cumulative projects listed in Table 4-1, which would also be required to follow applicable engineering regulations and best practices, the proposed project's contribution to a cumulative geology and soils impacts would not be cumulatively considerable.

4.3.4.4 Cumulative Impact Determination and Mitigation

The project would be designed and constructed in accordance with recommendations from the *Geotechnical Investigation* (Appendix I) and any supplemental geotechnical investigations required by **MM-GEO-1**. Because all structures would be engineered to specifications based on site-specific geotechnical conditions, the project's contribution to cumulative impacts would not be cumulatively considerable and no cumulative impact specific mitigation is required.

4.3.5 Hazards and Hazardous Materials

A significant cumulative impact on hazards and hazardous materials would occur if the proposed project were to result in a cumulatively considerable contribution to impacts related to (1) creating a significant hazard to the public or the environment, or (2) being located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 when evaluated within the context of past, present, and probable future projects with related impacts.

The proposed project would have no impacts related to (1) emitting hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; (2) being located within an airport land use plan or within two miles of a public airport or

public use airport; (3) interfering with an adopted emergency response or evacuation plan; or (4) exposing people or structures to wildland fires. Therefore, there would be no potential for the proposed project to result in a cumulatively considerable contribution to these issues.

4.3.5.1 Geographic Scope

The geographic scope for cumulative hazards and hazardous materials impacts consists of the areas that could be affected by proposed project activities as well as areas affected by other cumulative projects that could result in related impacts. The project does not propose any soil disturbance on the landside. All project construction would occur either in water or along the shoreline (e.g., revetment repairs, backfill at the Repair Complex Wharf). Therefore, the geographic scope for hazardous materials consists of the entirety of San Diego Bay, due to varying presence of contaminants throughout the Bay in both Bay water and sediment.

4.3.5.2 Cumulative Effects

As discussed in Section 3.5, *Hazards and Hazardous Materials*, record searches using the RWQCB's Geotracker database and DTSC's EnviroStor database were conducted. The results indicate that there are multiple sites within 0.25 mile of the project site that involve the handling of hazardous materials.

The San Diego Bay has a history of water and sediment contamination. As discussed in Section 3.5, there is an active cleanup and abatement order (No. R9-2012-0024) within the Shipyard sites, which includes the project site. A few of the cumulative projects listed in Table 4-1 are located along the Bay and involve in-water work that could have the potential to disturb existing contaminated sediment and release it to the environment, including Cumulative Project #28, BAE Systems Waterfront Improvement Project. All past, present, and probable cumulative projects would be required to comply with applicable federal, state, and local regulations; be required to obtain the requisite permits from the USACE (CWA Section 404 permit) and the RWQCB (CWQ Section 401 water quality certification) for in-water construction; and, in the case of Cumulative Project #28, be required to comply with the requirements of CAO No. R9-2012-0024 issued by the RWQCB. However, because some types of cumulative projects, such as pier replacement, require extensive in-water work, it is possible cumulative projects would contribute to the exacerbation of hazardous conditions in the Bay related to sediment contamination. Therefore, cumulative effects related to the potential release of hazardous materials to the environment from past, present, and probable future projects within the cumulative study area are significant.

4.3.5.3 Project Contribution

As described under Threshold 1 in Section 3.5, *Hazards and Hazardous Materials*, project construction would involve the temporary use and disposal of hazardous materials and wastes, including fuels, lubricants, and solvents. These materials would be properly stored, handled, used, and disposed of in accordance with applicable regulations and laws. Although the project would comply with applicable regulations and laws, hazardous materials could be accidentally released into the San Diego Bay, which could result in a potentially significant impact to the public and wildlife (**Impact-HAZ-1**). Mitigation measures **MM-HAZ-1** through **MM-HAZ-9** would be implemented, which include procedures for prevention and containment of accidental leaks and spills, routine inspection and instrumentation of equipment, worker training, and visual hazardous materials monitoring. Compliance with regulations and implementation of measures **MM-HAZ-1** through **MM-HAZ-9** would ensure that project

construction would not create a hazard to the public or environment and **Impact-HAZ-1** would be reduced to less than significant. As such, the project's contribution to potential accidental releases into the San Diego Bay would not be cumulatively considerable.

As stated in Section 3.5, *Hazards and Hazardous Materials*, the project site in within the area subject to regulatory oversight by the RWQCB pursuant to CAO R9-2012-0024. Remedial dredging associated with the CAO was not implemented across the entire NASSCO leasehold where intervening structures or sloping areas required due to structural offsets prevented access. Two portions of the proposed project would occur within areas of identified, known contamination, as evidenced by the CAO and associated investigations. In-water construction activities in the location of the Approach Pier identified in Figure 3.5-2 could disturb existing sand and sandy gravel cover material resulting in the exposure of underlying contaminated sediment to the environment which would be a significant impact (**Impact-HAZ-2**). In addition, the previously inaccessible area underneath the Repair Complex Wharf would be accessible with the removal of the existing piles supporting the wharf, which, if left unmitigated, could result in the displacement of contaminated sediments. Moreover, disturbance of sediment outside of the remediation boundaries would also have the potential to disturb contaminated sediments. As a result, construction activities within the project site would have the potential to expose the underlying existing contaminated sediment to the environment, which would be a significant impact (**Impact-HAZ-2**). Therefore, the proposed project would make a cumulatively considerable contribution to the significant cumulative impact associated with the potential release of hazardous materials into the environment.

To address the potential for releasing contaminated sediment to the environment, the project would be required to obtain a CWA Section 404 permit and a Rivers and Harbor Act Section 10 permit from the USACE and a CWA Section 401 water quality certification from the RWQCB and to comply with the requirements and conditions of approval imposed by the regulatory agencies. In addition, **MM-HAZ-10** requires the project to mitigate any significant impacts that its in-water construction activities would cause with respect to the disturbance of contaminated sediments. In addition, **MM-WQ-1** and **MM-WQ-2** would require implementation of silt curtains to contain spread of sediment and best practices for construction activities that would disturb the bay floor.

Finally, as a condition of approval of any CDP issued by the District, the project would be required to obtain all necessary permits and approvals from resource agencies, including the CWA Section 404 and the Rivers and Harbors Act Section 10 permits from the USACE and the CWA Section 401 Water Quality Certification from the RWQCB.

The proposed project would not make any contribution to long-term cumulative impacts because it does not propose any change in existing operations on the project site. Any contribution of the project to the significant cumulative effects would be temporary and would occur only during construction of the proposed project. With the project proponent's compliance with the permit requirements of the USACE and RWQCB, and implementation of mitigation measures **MM-HAZ-10** described in Section 3.5, *Hazards and Hazardous Materials*, **MM-WQ-1 and MM-WQ-2** described in Section 3.6, *Hydrology and Water Quality*, **Impact-HAZ-2** would be reduced to less than significant and the project would not make a cumulatively considerable contribution to significant cumulative effects associated with upset or accident conditions involving the release of the existing impaired sediments into the environment. Moreover, the project contribution to past, present, and probable future cumulative effects related to sediment contamination would not be cumulatively considerable because the project would not exacerbate the existing contaminated sediment condition; rather,

required mitigation measures and conditions of approval imposed by the USACE and the RWQCB would have the potential to improve the existing condition.

4.3.5.4 Cumulative Impact Determination and Mitigation

The proposed project's incremental contribution to cumulative hazard and hazardous materials impacts would be cumulatively considerable prior to mitigation identified in Section 3.5, *Hazards and Hazardous Materials*.

No additional cumulative impact specific mitigation would be required. Rather, the project would be required to obtain a CWA Section 404 permit and a Rivers and Harbors Act Section 10 permit from the USACE and a CWA Section 401 water quality certification from the RWQCB, to comply with any additional requirements imposed by the RWQCB, and to implement **MM-BIO-1** through **MM-BIO-7**, as described in Section 3.2, *Biological Resources*, **MM-WQ-1** and **MM-WQ-2,** as discussed in Section 3.6, *Hydrology and Water Quality*, and **MM-HAZ-1** through **MM-HAZ-10,** as discussed in Section 3.5, *Hazards and Hazardous Materials.*

With mitigation incorporated, the project's cumulative contribution would not be cumulatively considerable because it would not cause an exacerbation of the existing contaminated sediment condition. Therefore, the proposed project's contribution to cumulative impacts related to hazards and hazardous materials would not be cumulatively considerable and no additional mitigation specific to cumulative impacts would be required.

4.3.6 Hydrology and Water Quality

A significant cumulative impact on hydrology and water quality would result if the proposed project were to contribute to impacts related to violating any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality, (2) substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surfaces, or (3) conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan. These are evaluated within the context of past, present, and probable future projects.

The proposed project is not anticipated to result in any adverse 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 evaluated further below.

4.3.6.1 Geographic Scope

The geographic scope of analysis for cumulative impacts on hydrology and water quality includes the receiving waters of the San Diego Bay, which includes a number of the cumulative projects listed in Table 4-1. Given the project site is located on the downstream end of the watershed, the project site's cumulative contributions would be limited to the Bay waters.

4.3.6.2 Cumulative Effects

Many of the directly adjacent projects listed in Table 4-1 are located on the landside 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 San Diego Bay. Therefore, cumulative effects from past, present, and probable projects on landside water quality and hydrology would not be significant.

Past projects have contributed pollutants to the 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 polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (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 may involve activities that could exacerbate 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.

Present and probable future projects would be subject to Clean Water Act regulations that require compliance with water quality standards, including state and local water quality regulations and the District's JRMP and local *BMP Design Manual* (for projects within the District's jurisdiction) and the City of San Diego's Storm Water Management and Discharge Control Ordinance, which identifies water quality BMP requirements (for projects within the City's jurisdiction). For projects in the City, the Storm Water Management and Discharge Control Ordinance requires implementation of measures to reduce the risk of non-stormwater discharges and pollutant discharges through the use of BMPs. In addition, projects affecting waters of the U.S. 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 the 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.

4.3.6.3 Project Contribution

A cumulatively significant impact on hydrology and water quality presently exists because of San Diego Bay's status as an impaired water body and the potential for present and future projects to further degrade water quality with the addition of similar pollutants as those already impairing the Bay.

The proposed project would not involve any land-disturbing activities that would expose soils. Therefore, the project would have no potential to contribute to a cumulative impact associated with landside activities.

As discussed in Section 3.6, *Hydrology and Water Quality*, the project proposes components that would involve in-water construction and disturbance to the bay floor. Disturbance of the bay floor would cause sediment to temporarily be resuspended, thereby increasing turbidity and potentially lowering levels of dissolved oxygen, increasing salinity, increasing concentrations of suspended solids, and possibly releasing chemicals present in the sediment into the water column (**Impact-WQ-1**). Mitigation measure **MM-WQ-1** would require the deployment of silt curtains around pile removal and pile driving areas to minimize turbidity. Silt curtains would limit the spread of the turbidity plume outside the specific work area. With implementation of **MM-WQ-1**, increased turbidity levels would be generally confined to within the area of silt curtain containment. After initial high turbidity levels within the specific work area, sediments would disperse, and background levels would be restored within hours of disturbance. In addition, tidal currents would slowly dissipate the oxygen-poor water and replenish ambient oxygen levels within one to several tidal exchanges. Therefore, suspended solids and depressed oxygen levels in the water column of the specific work area would only be expected to result in temporary and limited effects on water quality. Similarly, **MM-BIO-4** would require contractor education and the implementation of construction measures, such as silt curtains, to reduce turbidity from propeller wash and bottom disturbance.

Furthermore, NASSCO would be required to develop and implement a turbidity monitoring plan to the satisfaction of the District and the San Diego RWQCB (**MM-WQ-1**) and implement best management practices during sediment disturbances (**MM-WQ-2**). During pile removal and pile driving activities, NASSCO would be required to conduct turbidity monitoring up- and down-current of the silt curtain to ensure that turbidity does not exceed the water quality objectives established in the turbidity monitoring plan in consultation with the RWCQB. If turbidity levels down current of the silt current exceed the performance standard, construction activities would be modified, reduced, or halted until the performance standard is achieved. Therefore, with the incorporation of **MM-BIO-4, MM-WQ-1**, and **MM-WQ-2**, **Impact-WQ-1** would be reduced to a level below significance.

As discussed in Section 3.5, *Hazards and Hazardous Materials*, construction activities have the potential to result in the release of hazardous wastes and materials into the San Diego Bay, which would also potentially result in a water quality-related impact (**Impact-WQ-2**). Project construction would involve the use and disposal of hazardous waste, including fuels, lubricants, and solvents. These materials would be properly stored, handled, used, and disposed of in accordance with applicable laws, regulations, and policies listed in Section 3.5.3 as well as **MM-HAZ-1** through **MM-HAZ-9,** and would require specific measures to avoid potentially adverse impacts on water quality, including secondary containment of hazardous materials (e.g., oils and fuels), equipment inspection to avoid leaks, spill kits to prevent spills from entering the bay, barge loading procedures to avoid overloading barges, and use of a flattop barge with containment walls to prevent debris from entering the water. In addition, best management practices for work that would potentially disturb the bay floor would be required (**MM-WQ-2**). With implementation of these mitigation measures, **Impact-WQ-2** would be reduced to less than significant.

As also discussed in Section 3.5, *Hazards and Hazardous Materials*, the project would be required to obtain a CWA Section 404 permit and a Rivers and Harbors Act Section 10 permit from the USACE and a CWA Section 401 water quality certification from the RWQCB, and to comply with all requirements and conditions of approval imposed by the regulatory agencies, for in-water project activities that would result in dredge/fill in the San Diego Bay. In addition, he San Diego RWQCB issued CAO R9-2012-0024 for sediment contamination within the NASSCO and BAE Systems leaseholds. The proposed pile removal and replacement has potential to disturb contaminated sea-floor sediments associated with CAO R9-2012-0024, which may result in a potentially significant

water quality impact (**Impact-WQ-3**). As described in Section 3.5, mitigation measure **MM-HAZ-10** would include implementation of a sediment management program and post-waterside remediation, as necessary, based on the results of the sediment sampling. It would also ensure that any remediation activities that may be needed would comply with the RWQCB's Final EIR for the Shipyard Sediment Remediation Project (2011) (SCH#2009111098) and the associated MMRP. With implementation of mitigation measure **MM-HAZ-10**, **Impact-WQ-3** would be reduced to less than significant. As such, the project's contribution to past, present, and probable future cumulative effects related to water quality would not be cumulatively considerable because the project would not worsen water quality in the San Diego Bay.

4.3.6.4 Cumulative Impact Determination and Mitigation

The proposed project's incremental contribution to cumulative water quality impacts would be cumulatively considerable prior to mitigation identified in Section 3.6, *Hydrology and Water Quality*.

No additional cumulative impact specific mitigation would be required, however. Rather, the project would be required to obtain a CWA Section 404 permit and a Rivers and Harbors Act Section 10 permit from the USACE and a CWA Section 401 water quality certification from the RWQCB, to comply with any additional requirements imposed by the RWQCB, and to implement **MM-WQ-1** and **MM-WQ-2,** as discussed in Section 3.6, *Hydrology and Water Quality*, **MM-BIO-4**, as described in Section 3.2, *Biological Resources*, and **MM-HAZ-1** through **MM-HAZ-10,** as discussed in Section 3.5, *Hazards and Hazardous Materials.*

With mitigation incorporated, the project's contribution would not be cumulatively considerable because it would not worsen water quality in the San Diego Bay. Therefore, the proposed project's contribution to cumulative impacts related to hydrology and water quality would not be cumulatively considerable and no additional mitigation measures specific to cumulative impacts would be required.

4.3.7 Land Use and Planning

Cumulative effects from past, present, and probable future projects are determined by whether there are cumulative project-related conflicts with the applicable land use plans that have resulted or will result in significant physical impacts on the environment. A significant cumulative impact would occur if the proposed project would result in a cumulatively considerable contribution to any such inconsistencies. As discussed in Chapter 5, *Additional Consequences of Project Implementation*, because the project would have no impact related to the potential of dividing an established community, this issue is not addressed further.

4.3.7.1 Geographic Scope

The geographic scope of analysis for cumulative land use and planning impacts to which the proposed project may contribute includes land and water areas subject to the PMP, the adjacent neighborhood of Barrio Logan, and the projects identified in Table 4-1.

4.3.7.2 Cumulative Effects

Past projects within the surrounding area have been subject to local regulations governing land use decisions and have resulted in the development of a highly industrialized area west of East Harbor Drive. Throughout the development of past projects, the surrounding area has generally maintained

its street grid system, and development has not resulted in the division of established neighborhoods. The District's PMP, as amended, has been certified by the California Coastal Commission (CCC), and all past development projects within District boundaries (since the PMPs original adoption in 1981) 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 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.

In addition, construction and operation associated with recently approved and developed projects in the cumulative study area have been required to demonstrate consistency with the San Diego Downtown Community Plan, the Barrio Logan Community Plan, and/or the PMP (which are the guiding land use policy documents for the surrounding area and are used to calculate projections in the SIP and RAQS), and the same can be expected of probable future projects.

Consequently, there are no present or probable future development projects within the project site's cumulative geographic scope that would result in a land use inconsistency that could result in unavoidable significant environmental impact; therefore, cumulative effects from past, present, and probable future projects would not be significant.

4.3.7.3 Project Contribution

As discussed in Section 3.7, *Land Use and Planning*, and Chapter 5, Section 5.3, *Effects Not Found to Be Significant*, the project would have no impact related to dividing an established community; therefore, no cumulative analysis is required for this topic area. In addition, as discussed in Section 3.7, the project would not result in any changes in existing land uses. Rather, the project would result in on-site improvements that would ensure the continued use of the project site for its designated uses. NASSCO would be required to obtain all necessary approvals from agencies with regulatory oversight, including the District, RWCQB, and USACE.

However, prior to mitigation, the significant impacts of the project on biological resources, contaminated sediment and water quality would be a potential conflict with applicable regulations and plans, the result of which would be a significant impact on the environment (**Impact-LU-1**). Therefore, to ensure consistency with the CCA and the San Diego Bay INRMP, **MM-BIO-1** through **MM-BIO-7** are required to avoid impacts on biological resources, including on special status species, sensitive marine habitat, and from proposed fill. **MM-WQ-1** and **MM-WQ-2** are required to avoid water quality impacts from disturbing sediments. Similarly, **MM-HAZ-1** through **MM-HAZ-9** require several BMPs for handling hazardous substances and **MM-HAZ-10** is required to ensure contaminated sediments are not released into the water column and spread beyond the current contaminated areas in the project site. Therefore, after mitigation is incorporated, **Impact-LU-1** would be reduced to less than significant. Consequently, the project contribution to past, present, and probable future cumulative effects related to land use and planning, which are not considered cumulatively significant, would not be cumulatively considerable because the project would be consistent with applicable plans after mitigation is incorporated.

4.3.7.4 Cumulative Impact Determination and Mitigation

The impact analysis under Section 4.3.7.2 determined that there is no significant cumulative land use and planning impact present. In addition, as discussed in Section 3.7, *Land Use and Planning,* project-related land use and planning impacts would be considered less than significant after mitigation. Therefore, the project would not make a cumulatively considerable contribution to a significant cumulative impact.

4.3.8 Noise and Vibration

A significant cumulative impact on noise and vibration would occur if the proposed project were to result in a cumulatively considerable contribution to impacts related to exceedances of noise standards, groundborne vibration, or ambient noise levels when evaluated within the context of past, present, and probable future projects. As discussed in Section 3.8, *Noise and Vibration*, it was determined that there would be no impacts related to excessive noise exposure from airports or private airstrips; as such, cumulative impacts related to air traffic noise are not evaluated further below.

4.3.8.1 Geographic Scope

The geographic scope of analysis for cumulative noise impacts (construction and operations) includes the project site and adjacent land uses, including nearby noise-sensitive receptors. The cumulative study area is in a highly industrialized area with ambient noise levels influenced by adjacent transportation corridors and industrial land uses.

4.3.8.2 Cumulative Effects

Very few of the cumulative projects listed in Table 4-1 are within the cumulative study area for noise impacts. The distance to the other projects, along with the shielding provided by intervening buildings, would substantially reduce construction noise from these projects so that they would not generate any cumulative impacts in the immediate vicinity of the project site. Most of the nearby related projects are already constructed, and, as such, their construction activity could not overlap with that of the proposed project, including the BAE Systems Pier 1 North Drydock (#2), which is already completed. Construction of the adjacent BAE Systems Waterfront Improvement Project (#28), which was approved by the Board in February 2022, would likely overlap with construction of the proposed project. However, the EIR prepared for the BAE Systems Waterfront Improvement Project (#28) determined that the project would result in less-than-significant noise and vibration impacts on nearby land uses and would be below applicable City of San Diego standards.

The remaining project within the geographical scope for analysis is the Port Master Plan Update (#12), which is a planning document that could result in water and land use designation changes within the District's jurisdiction in the project area. However, the PMPU has not yet been adopted, does not involve the approval of any development project and no specific related projects have been identified as of the preparation of this EIR. Therefore, it would be highly speculative to assume any specific construction activities or schedules for unknown future development occurring under the proposed Port Master Plan Update. As a result, there would be no significant cumulative noise or vibration impacts.

In terms of operational noise, the cumulative projects within the geographic scope of the cumulative analysis consist primarily of maintenance, improvement, and replacement projects for existing facilities used for heavy industrial activity related to ship repair, which are current activities in the project area and its surroundings. As a result, operational noise and vibration levels from these projects would be similar in character and level to the existing noise conditions and would not be expected to cause significant changes in the existing environment. Therefore, cumulative effects from past, present, and probable future projects would not be significant.

4.3.8.3 Project Contribution

As discussed in Section 3.8, *Noise and Vibration*, construction activities associated with the proposed project would result in less-than-significant impacts relative to local noise standards and temporary noise increases, as well as established thresholds for groundborne vibration. In addition, as noted above, a cumulatively significant noise impact does not exist, and the proposed project would not result in an impact such that a cumulatively significant impact would be created. The proposed project's contribution to construction-related noise and vibration impacts would be less than cumulatively considerable.

In terms of project operations, the proposed project would not expand the existing use of the project site or expand existing shipyard operations, including any increase in capacity to service or build more ships. The same operations and maintenance activities would be undertaken in the same general locations and using the same types of equipment as are currently used. Shipyard operations would not introduce any new sources of noise and vibration. As such, operational noise and vibration levels are not anticipated to change from current conditions. Furthermore, as noted above, a cumulatively significant noise and vibration impact does not exist, and the proposed project would not result in an impact such that a cumulatively significant impact would be created. The proposed project's contribution to noise and vibration impacts would not be cumulatively considerable.

4.3.8.4 Cumulative Impact Determination and Mitigation

The impact analysis under Section 4.3.8.2 determined that there is no significant cumulative noise and vibration impact present. In addition, as discussed in Section 3.8, *Noise and Vibration,* project-related noise impacts would be considered less than significant. Therefore, the project would not make a cumulatively considerable contribution to a significant cumulative impact.

4.3.9 Transportation, Circulation, and Parking

A project's impact on transportation is measured by the number of vehicle miles traveled (VMT) that it would generate. By its nature, VMT is inherently a cumulative issue, as it is not likely that any single project would be large enough to prevent the region or state from meeting its VMT reduction targets, which correlate to the state's GHG reduction targets. Rather, a project's individual VMT contributes to cumulative VMT impacts.

Cumulative impacts on transportation, circulation, and parking could also occur if the proposed project, when combined with past, present, and probable future projects, would conflict with applicable programs, plans, ordinances or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Moreover, a cumulative parking impact could occur when these cumulative projects combine with the proposed project to result in an insufficient parking supply that would reduce public access to the District's Tidelands.

The proposed project is not anticipated to result in impacts related to substantial increases in hazards due to geometric design features or incompatible uses, or inadequate emergency access. As such, cumulative impacts related to these issues are not evaluated further below.

4.3.9.1 Geographic Scope

The geographic scope for cumulative VMT impacts includes the entire San Diego region. As such, the VMT analysis within Section 3.9, *Transportation, Circulation, and Parking,* is inherently a cumulative analysis. However, a summary of the discussion is provided below. The geographic scope of cumulative analysis for all transportation, circulation, and parking impacts includes all past, present, and probable future projects identified near the project site and along the San Diego Bay waterfront that have affected, or would have the potential to affect, the same transit, roadway, bicycle, pedestrian, and parking facilities as the proposed project.

4.3.9.2 Cumulative Effects

Conflict with Applicable Programs, Plans, Ordinances, or Policies Addressing the Circulation System

Cumulative effects on the circulation system, including transit, roadway, pedestrian, and bicycle facilities could occur if past, present, and probable future projects would conflict with a program, plan, ordinance, or policy addressing these facilities. Past projects identified in Table 4-1 would have been required to demonstrate consistency with any program, plan, ordinance, or policy addressing the circulation system. Probable future projects such as National City Bayfront Projects and Plan Amendments (Cumulative Project #16) would include implementation of Segment 5 of the Bayshore Bikeway, which is a bicycle facility identified in applicable plans, including the San Diego Regional Bike Plan and National City Bicycle Master Plan. Other present and probable future projects within the cumulative study area would be required to demonstrate no conflict with programs, plans, ordinances, and policies related to transit, roadway, pedestrian, and bicycle facilities. Therefore, cumulative effects from past, present, and probable future projects would not be significant.

Vehicle Miles Traveled

The generation of VMT, which is a function of the number and distance of vehicle trips, is largely a cumulative impact by nature. VMT from past, present, and probable future projects have contributed to, and will continue to contribute to, cumulative VMT impacts as well as similarly cumulative secondary physical environmental effects such as increased GHG emissions. SANDAG's 2050 Regional Average for VMT includes past and present cumulative projects that were either constructed, in progress, or in the planning phases when each regional transportation model is completed. As such, while these projects have been accounted for in the 2050 Regional Average VMT calculations, some present as well as probable future projects have not.

Cumulative present and probable future projects would be required to comply with SB 743 during project-specific environmental review. However, although compliance is required, it is not guaranteed each present and probable future project would be able to achieve a 15% reduction (or other applicable thresholds used by the relevant Lead Agency) 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% below the regional average would contribute to increased VMT in the region, which would contribute to the prevention of the state and region reaching the established GHG reduction targets. Therefore, past, present, and probable future projects in the region could result in a cumulatively significant VMT impact.

Parking

Due to the industrial setting of the project area, and the nature of most of the nearby cumulative projects as industrial improvement or redevelopment projects, none of the past, present, or probable projects listed in Table 4-1 include components that would result in inadequate parking within the cumulative study area such that public access to the District Tidelands would be reduced or otherwise made more difficult. Therefore, cumulative effects from past, present, and probable future projects would not be significant.

4.3.9.3 Project Contribution

As noted above, there is not a significant cumulative effect related to inconsistencies with programs, plans, ordinances, and policies addressing the circulation system, including transit, roadway, pedestrian, and bicycle facilities; or inadequate parking supply. In addition, as discussed in Section 3.9, the proposed project would not result in a significant impact associated with VMT and thus would not have the potential to contribute to cumulative impacts related to these issues.

As discussed in Section 3.9, construction worker VMT is not anticipated to be newly generated, rather it would be drawn from existing workers in the City of San Diego area and would be redistributed through the transportation network based on their travel to different work sites each day. The temporary generation of VMT from construction traffic is not expected to substantially increase VMT in the region such that it could contribute to long-term adverse environmental effects from greenhouse gas and criteria pollutant emissions or hinder the promotion of multimodal transportation systems. Therefore, VMT generated by construction of the proposed project is not anticipated to contribute to the cumulatively considerable VMT impact.

In terms of project operations, the proposed project would not expand the existing use of the project site or expand existing shipyard operations, including any increase in capacity to service or build more ships. The same operations and maintenance activities would be undertaken in the same general locations and using the same types of equipment as are currently used. Therefore, the project is not anticipated to change the daily number of employees that access the NASSCO facilities, nor are they anticipated to increase the number of deliveries, vendors, or other services to the facility. Because no new vehicle trips would be generated during operation of the project, the project would not exceed the screening criteria for small projects outlined in the Technical Advisory. VMT impacts associated with project operations would be less than significant. Because VMT thresholds are inherently cumulative in nature, the project's contribution to cumulative transportation impacts would also be less than significant.

4.3.9.4 Level of Significance Prior to Mitigation

The impact analysis under Section 4.3.9.2 determined that there are no significant cumulative impacts related to inconsistencies with programs, plans, ordinances, and policies addressing the circulation system, including transit, roadway, pedestrian, and bicycle facilities; or inadequate parking supply. In addition, it is not anticipated that the proposed project would increase VMT and,

as discussed in Section 3.9, *Transportation, Circulation, and Parking,* project-related transportation impacts would be considered less than significant. Therefore, the project would not make a cumulatively considerable contribution to a significant cumulative VMT impact.

Chapter 5
Additional Consequences of Project Implementation

5.1 Introduction

This chapter addresses the potential for additional consequences related to implementation of the project, pursuant to State CEQA Guidelines Sections 15126.2(e)[1] and 15128. Specifically, this chapter (1) discusses the growth-inducing impacts of the project, which pertain to the ways in which the project could promote either direct or indirect growth, and (2) identifies the environmental effects of the project that were determined to be not significant during the initial environmental review process.

5.2 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 could affect the surrounding environment. Direct growth inducement would result if a project were to, for example, involve 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 were to remove an obstacle to additional development, such as 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 project that may encourage or facilitate 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 3, *Environmental Analysis*, and Chapter 4, *Cumulative Impacts*, discuss the adverse impacts on resources resulting from project implementation, including any impacts that would be caused by cumulative effects.

5.2.1 Foster Economic Growth

One criterion by which growth inducement can be measured involves economic growth. The project would allow NASSCO to address deficiencies related to the age and condition of structures, shoreline sloughing, and operational conditions at the existing dry dock. The project would enable NASSCO to

[1] The requirements of State CEQA Guidelines Section 15126.2(a) and (c) are met in Chapter 3, *Environmental Analysis*, and Chapter 4, *Cumulative Impacts*, under each resource discussion. Additionally, the requirements of State CEQA Guidelines Section 15126.2(b) are met in Section 3.3, *Climate Change, Greenhouse Gas Emissions and Energy*. Lastly, the proposed project does not meet any of the criteria in State CEQA Guidelines Section 15127 requiring a discussion of significant irreversible environmental changes under Section 15126.2(c).

safely continue its existing shipbuilding and repair operations that provide economic benefits to the region. As such, any growth inducement would be driven primarily by job growth.

During project construction, up to 10 construction workers would be present on the construction site each day. The generation of temporary employment opportunities would have a negligible influence on economic growth in the area. In the long term, operation of the project would not induce economic growth because no new long-term employment opportunities would be created. However, by updating existing facilities in the NASSCO leasehold, including the drydock, NASSCO does anticipate being able to preserve jobs currently provided that might otherwise be reduced due to the inability to meet customer needs (see Chapter 2, Section 2.2.2, *Project Objectives)*. Therefore, with project implementation, a potential loss in jobs would potentially be avoided.

5.2.2 Foster Population Growth

The project would not result in the construction of housing, which is prohibited on District property under the Public Trust Doctrine, and would not increase the city's population in a manner that would necessitate the construction of additional housing. Approximately 10 workers would be present on the project site each day during the construction period. Temporary jobs generated during project construction would be drawn from the local workforce. Construction workers are anticipated to commute from within the surrounding area and would likely not require temporary local housing. Furthermore, the project does not include the expansion of existing infrastructure or an increase in existing shipyard operations that would necessitate hiring permanent employees. Therefore, the project would not result in the construction of additional housing, either directly or indirectly, and, as such, would not be growth inducing as a result of new housing.

5.2.3 Removal of Obstacles to Population Growth

As stated above, a project could indirectly induce growth if it were to remove a constraint on a required public service or utility. A project could also indirectly induce growth if it were to establish a precedent-setting action (e.g., an innovation, a change in zoning, a general plan amendment approval). The project would not require a Port Master Plan amendment or infrastructure upgrades beyond the boundaries of the project site and, therefore, would not result in the removal of obstacles to growth.

5.3 Effects Not Found to Be Significant

Pursuant to State CEQA Guidelines Section 15063, the District prepared an Environmental Initial Study Checklist (Appendix C) that determined that effects related to aesthetics, agriculture and forestry resources, cultural resources, mineral resources, population and housing, public services, recreation, and tribal cultural resources, utilities and service systems, and wildfire would not be significant. In addition, the District determined through the Initial Study Environmental Checklist that the project would have a less-than-significant impact or no impact on certain issue areas within air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, and transportation. In accordance with State CEQA Guidelines Section 15128, a brief explanation indicating the reasons why the effects on these resources would not be significant is provided under each subheading below.

5.3.1 Aesthetics

5.3.1.1 Adverse Effect on a Scenic Vista

The visual character of the project site and surrounding area is defined by the existing industrial uses to the west, military uses to the south and east, transportation corridor to the north, and commercial and residential uses in the adjacent community of Barrio Logan further north. Views of the project site from nearby surrounding areas are generally obstructed by security fencing and intervening office buildings within the NASSCO shipyard, although cranes and vessels can be seen in the background. Planning District 4, where the project site is located, does not contain any vista areas, as designated by the Port Master Plan (PMP) (District 2020a). Designated vistas in District 6 (Coronado Bayfront) have partial but mostly obstructed views of the project site. The project site represents a small portion of the viewshed from Coronado. Furthermore, the character of the project site is compatible with that of the shipyards immediately to the northwest and southeast. Therefore, existing views from designated vistas would not change substantially with implementation of the project, and impacts on scenic vistas would be less than significant.

5.3.1.2 Scenic Resources along a State Scenic Highway

The San Diego-Coronado Bay Bridge (State Route 75 [SR-75]), located 0.6 mile northwest of the project site, is a state scenic highway (Caltrans 2019). Long-distance views of downtown San Diego from the San Diego-Coronado Bay Bridge are dominated by a mix of high-rise residential, commercial, and urban developments. The project site is partially visible from SR-75 behind the adjacent ship repair facility operated by BAE Systems. There are no trees, rock outcroppings, or other scenic resources along SR-75. Project implementation would not encroach onto Caltrans right-of-way. Furthermore, project implementation would not result in a noticeable visual change in the industrial quality of the project site and, therefore, would not diminish views from SR-75. Therefore, impacts on designated scenic highways would be less than significant.

5.3.1.3 Conflicts with Existing Zoning or Other Regulations Governing Scenic Quality

The project site is in an area of the District that is developed entirely with industrial and maritime uses. The land use designation for the project site is Marine Related Industrial (Land) and Specialized Berthing (Water). Project implementation would not result in a noticeable visual change in the industrial quality of the project site. The project would not expand the existing use of the project site or expand existing shipyard operations, including any increase in capacity to service or build more ships. In addition, the project would not require changes to existing land use designations. Furthermore, the project would not conflict with policies identified in the PMP for preserving visual access and vista areas. Therefore, the project would not conflict with applicable zoning and other regulations governing scenic quality and impacts would be less than significant.

5.3.1.4 Light and Glare

The project would require some nighttime construction activities, such as project deliveries, formwork, and welding. Additional temporary light sources may be required to illuminate work areas; however, lighting would be directed on-site and would be of similar intensity to existing light

sources throughout the NASSCO shipyard and adjacent land uses (e.g., outdoor security lighting and spillover lighting from streetlamps, vehicles, and buildings). Following construction, the project site would be returned to a similar condition as the existing setting. During operations, the project would not introduce permanent light sources or new structures with highly reflective materials. Therefore, the project would not create new sources of substantial light or glare that would adversely affect day or nighttime views in the area. Impacts would be less than significant.

5.3.2 Air Quality

5.3.2.1 Odors and Other Emissions

Project operations would not include activities that typically generate odors, such as those associated with wastewater treatment facilities, sanitary landfills, composting facilities, petroleum refineries, chemical manufacturing plants, or food processing facilities. Implementation of the project would therefore not result in exposure of a substantial number of people to objectionable odors. Minor odors from the use of heavy-duty diesel equipment during project construction activities would be intermittent and temporary, and would dissipate rapidly from the source with an increase in distance. Therefore, project construction is not anticipated to result in an odor-related impact. Thus, this impact would be less than significant.

5.3.3 Agriculture and Forestry Resources

5.3.3.1 Important Farmland

The project site is within the NASSCO shipyard and is developed entirely with maritime-related industrial uses. Land uses in proximity to the project site include heavy and light industry, military, and commercial and office land uses. No agricultural land or operations are located on or adjacent to the project site. The project site is classified as Urban and Built-Up Land by the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (DOC 2018, City of San Diego 2007: Figure 3.1-1). Therefore, the project would not convert Important Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. No impact would occur.

5.3.3.2 Williamson Act Contracts or Agricultural Zoning

The land use designation for the project site is Marine Related Industrial (Land) and Specialized Berthing (Water). The project site is not zoned for agricultural use and no agricultural resources or operations exist within the project site or adjacent areas. No Williamson Act contracts apply to the project site (City of San Diego 2007: Figure 3.1-1). Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract. No impact would occur.

5.3.3.3 Conflict with Forest Land or Timberland Zoning

The land use designation for the project site is Marine Related Industrial (Land) and Specialized Berthing (Water). The project site is not zoned for forestland, timberland, or zoned Timberland Production. There is no timberland present on or adjacent to the project site. Therefore, the project would not conflict with existing zoning for forest land or timberland and no impact would occur.

5.3.3.4 Loss or Conversion of Forest Land

No forest land or timberland resources exist on or adjacent to the project site, which is in an urbanized portion of the City of San Diego. Therefore, the project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

5.3.3.5 Other Changes Involving the Conversion of Farmland or Forest Land

No agricultural, forestland, or timberland resources exist on or adjacent to the project site. Therefore, the project would not result in changes to the existing environment that could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

5.3.4 Cultural Resources

5.3.4.1 Historical Resource

A historical resources assessment (Anchor QEA, LLC 2021) was conducted for the built environment, to determine if any existing structures located within the project site were eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). To be eligible for inclusion in the NRHP or the CRHR, a property generally must be at least 50 years old, have significance, and retain integrity. Under NRHP Criteria Consideration G and CRHR criteria at CCR 15, Chapter 11.5, Section 4850(d), a property less than 50 years old can be eligible if it is of exceptional significance. A property can have exceptional significance if it is notable in context of other similar properties, if it has been the object of scholarly study, if it is fragile or short-lived, or if there is widespread recognition of its historical value. The assessment concluded that there are no structures older than 50 years old within the project site and the piers, berths, and bulkheads are of common construction and are not significantly associated with local, state, or national historical context in order to be considered exceptional significance; therefore, none of the existing structures are considered historical resources under CEQA. Therefore, there would be no impact to historical resources.

5.3.4.2 Archaeological Resource

The shoreline and majority of the project site above ground are underlain by artificial fill; including compacted engineered and non-compacted, nonengineered fill. A records search was obtained from the South Coastal Information Center on April 5, 2021, to identify previously documented resources within and near the project site. Although archaeological resources have previously been recorded within a quarter-mile radius of the project site, the one prehistoric archaeological resource is not located within artificial fill. The historic-era archaeological resources consist of railroad remnants and a building foundation; however, the project site has been redeveloped numerous times and has no potential to contain historic-era archaeological resources of this nature. Activities related to the repair and replacement of the quay wall would occur in the artificial fill. Therefore, no original ground would be disturbed and no impacts to archaeological resources are expected as a result of the repair and replacement of the quay wall. The pile replacement process would involve ground-disturbing activities within the Bay, primarily in locations that have been previously disturbed by the installation of the existing piles. Additionally, the project site portion of the Bay has been previously dredged and disturbed during installation of the existing piles and other past activities at the project site. As such, it is not anticipated that significant (i.e., intact) archaeological resources are present where the project

would involve ground-disturbing activities. Therefore, the project would not cause an adverse change in the significance of an archaeological resource; no impact would occur.

5.3.4.3 Human Remains

There are no known cemeteries or burials on the project site or immediate area. It is highly unlikely that human remains would be encountered during construction of the project because the project site consists of imported fill and water. However, in the unlikely event that human remains are discovered during construction, the remains would be treated in accordance with existing laws and regulations, notably Public Resources Code (PRC) Section 5097 and Health and Safety Code Section 7050.5, ensuring that impacts would be less than significant.

5.3.5 Geology and Soils

5.3.5.1 Rupture of a Known Earthquake Fault

According to the City's Seismic Safety Study, Geologic Hazards and Faults, Sheet 13, the project site is not within an active Alquist-Priolo Earthquake Fault Zone (City of San Diego 2008a). The nearest active Alquist-Priolo fault zone is the Point Loma Fault Zone, located approximately 0.6 mile northwest of the project site (CGS 2019; Appendix I). The *Geotechnical Investigation* (Appendix I) concludes that the risk associated with ground rupture at the project site is considered low. Because there are no active faults within the project site, the project would have no potential to cause or exacerbate the risk of a fault rupture. No impact would occur.

5.3.5.2 Strong Seismic Ground Shaking

Although the project site is not within an active fault zone, the project site is in a seismically active region of southern California and would be susceptible to seismic ground shaking produced by nearby faults during earthquakes. The *Geotechnical Investigation* (Appendix I) concluded that the risk associated with ground shaking is considered very high. However, the project components, including the proposed pile driving, would have no potential to exacerbate the existing risk of strong seismic ground shaking. In addition, the project would be designed and constructed in accordance with the recommendations in the *Geotechnical Investigation* that address risks related to seismic ground shaking. The *Geotechnical Investigation* provides recommendations for pile installation methods; slope inclination; pile capacity, including lateral load capacities for vertical piles; and sheet-pile bulkhead lateral pressures, which would provide structure stability and security and would not worsen the existing conditions. Because the project would be engineered to specifications based on site-specific geotechnical conditions, project construction and operations would not cause potential substantial adverse effects from strong seismic ground shaking and a less-than-significant impact would occur.

5.3.5.3 Landslides

According to the City of San Diego Seismic Safety Study, the project site is not within a landslide hazard area (City of San Diego 2008a: Grid Tile 13). In addition, the *Geotechnical Investigation* (Appendix I) did not identify any features indicative of ancient natural landslides on or adjacent to the project site . The landside portions of the NASSCO shipyard are completely developed and generally flat. There are no steep slopes within or adjacent to the project site. Project construction would occur over or within water and there are no project components that would have the potential to exacerbate existing the

risk of landslides. Therefore, project construction and operations would not cause potential substantial adverse effects from landslides and no impact would occur.

5.3.5.4 Soil Erosion or Loss of Topsoil

The landside portion of the NASSCO facility is entirely paved with no areas of exposed soil. Construction activities would occur over water and would not involve grading or excavation activities that have potential to disturb soils. In addition, NASSCO operates under an individual National Pollutant Discharge Elimination System (NPDES) Permit (Order R9-2016-0116) and maintains a facility Best Management Practices (BMP) Plan Manual, which include operational erosion control and site stabilization measures. NASSCO would be required to maintain all existing operational and maintenance BMPs. Therefore, project construction and operations would not result in substantial erosion or the loss of topsoil and no impact would occur.

5.3.5.5 Expansive Soil

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. Underlying soils found in the BAE Systems leasehold adjacent to the project site include Huerhuero-Urban land complex (2 to 9 percent slope) and Tidal flats, which have high shrink-swell behavior, as well as Urban land, which has variable shrink-swell behavior (District 2020b; USDA 1973). The underlying soils in the BAE Systems leasehold are partially composed of clays and, as such, could be subject to expansion. Because of the developed nature of the project site, it is likely that any expansive soils have been removed during previous development of the site. No construction activities are proposed on the landside of the project site. In addition, the project design would include all necessary stabilizing components for in-water structures, including the installation of piles and reconstruction of the revetment walls. Because the project would be engineered to specifications based on site-specific geotechnical conditions, project construction and operations would not result in substantial risks to life or property from constructing on expansive soils. Impacts would be less than significant.

5.3.5.6 Septic Systems

The project does not propose septic tanks or alternative wastewater disposal systems; therefore, no impact would occur.

5.3.5.7 Paleontological Resources and Unique Geologic Features

The project site is situated on artificial engineered fill, which overlies Holocene marine deposits. This underlying formation has a low paleontological sensitivity. Given that construction activities would be in-water and would not require disturbance of native soils and all in-water work would consist of pile replacement/installation and reconstruction of revetments, it is unlikely that paleontological resources would be encountered. The project would not introduce new activities during operation that would have potential to disturb the underlying formation. Therefore, the project would not destroy a unique paleontological resource or site or unique geologic feature. No impact would occur.

5.3.6 Hazards and Hazardous Materials

5.3.6.1 Hazards within One-Quarter Mile of a School

There are no existing or proposed schools within one-quarter mile of the project site. The closest school is the Logan Memorial Educational Campus at 2875 Oceanview Avenue, approximately 0.4 mile north of the project site. As such, the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, no impact would occur.

5.3.6.2 Airport Land Use Plan

No public airports or private airstrips are within 2 miles of the project site. The closest public airport is the San Diego International Airport, approximately 3.3 miles northwest of the project site. In addition, the North Island Naval Air Station is approximately 2.8 miles northwest of the project site. According to the San Diego County Regional Airport Authority airport land use compatibility plans (ALUCPs), the project site is not within the 60- or 65-decibel (dB) community noise equivalent level (CNEL) noise contours or within the boundaries of established safety zones for these airports (SDCRAA 2014: Exhibit 2-1, SDCRAA 2020: Exhibit 4). Therefore, the project would not result in a safety hazard or excessive noise for people working in the project area. No impact would occur.

5.3.6.3 Emergency Response or Evacuation Plan

The San Diego County Office of Emergency Services adopted its Emergency Operations Plan (EOP) in September 2018. Highways in proximity to the project site include I-5, I-15, and SR 75, which are identified in the EOP as primary evacuation routes in San Diego County (County of San Diego 2018). Project construction would occur within the NASSCO leasehold, except for the installation of the west offshore mooring dolphin, which would occur outside the District's jurisdiction. Project construction would occur over water and would not encroach onto any evacuation routes. Therefore, emergency access to and from the project site along Harbor Drive and on designated evacuation routes would be maintained during project construction. Because project implementation would not expand the existing use of the site or expand existing shipyard operations, the project would not result in permanent changes to emergency access following construction. Thus, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No impacts would occur.

5.3.6.4 Wildland Fires

State law requires that all local jurisdictions identify very high fire hazard severity zones (VHFHSZ) 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. The project site is within a local responsibility area and is designated by the California Department of Forestry and Fire Protection (CAL FIRE) as a non-VHFHSZ (CAL FIRE 2009). The nearest lands classified as a state responsibility area are approximately 7.8 miles southeast of the project site and the nearest lands classified as VHFHSZ are approximately 1.9 miles north of the project site (CAL FIRE 2007; CAL FIRE 2009). Therefore, the project site is not located in or near a state responsibility area or lands classified as VHFHSZ. Furthermore, the project site is in a developed

urban area on and adjacent to the San Diego Bay. The project site is over water, lacks vegetation, and is not in an area susceptible to wildland fire. Therefore, the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fire. No impact would occur.

5.3.7 Hydrology and Water Quality

5.3.7.1 Groundwater Supplies and Recharge

Construction activities would occur within the NASSCO leasehold located on and adjacent to the San Diego Bay. The project would not result in a net increase in impervious surfaces, such that the surface area for percolation of stormwater would be reduced. All stormwater runoff from the NASSCO facility is designed to be captured and contained for subsequent discharge to the San Diego Metropolitan Sanitary Sewer System. Therefore, groundwater recharge from stormwater should not occur at the project site. Furthermore, groundwater at the project site is saline from saltwater intrusion and is not used as a groundwater supply source.

The project would not require landside excavation and would not have the potential to encounter groundwater such that dewatering would be required. Furthermore, construction-related water use would represent a small demand on local and regional water supplies that could be accommodated by the existing water service provider. The project would not generate a permanent increase in water demand compared to existing conditions. Consequently, the project would not substantially decrease groundwater supplies or interfere with groundwater recharge. Impacts would be less than significant.

5.3.7.2 Alter Drainage Patterns

The following sections describe the potential for the project to alter drainage patterns in a manner that would result in (i) substantial erosion or siltation, (ii) an increase in surface runoff resulting in flooding, (iii) the creation of runoff that exceeds stormwater drainage systems, or (iv) flood flows to be impeded or redirected.

Erosion

The NASSCO facility is entirely paved with no areas of exposed soil. Construction activities would occur over water and would not involve grading or excavation activities that have potential to disturb landside soils. Stormwater runoff from the NASSCO facility would continue to be captured and contained for subsequent discharge to the San Diego Metropolitan Sanitary Sewer System. NASSCO would be required to maintain all existing operational and maintenance BMPs for stormwater runoff. Therefore, the project is not anticipated to result in on- or off-site erosion or siltation. Impacts would be less than significant

Stormwater Runoff and Flooding

The project would result in a net increase in overwater coverage of 10,210 square feet for permanent structures (i.e., floating dry dock, mooring dolphins, approach pier fender system, and Repair Complex Wharf) and 300 square feet for temporary structures (i.e., catwalk and removable brow). Stormwater runoff from the NASSCO facility, including the new overwater structures, would be captured and contained in the existing storm water diversion system (SWDS) for subsequent, controlled discharge to the San Diego Metropolitan Sanitary Sewer System. NASSCO would be

required to maintain all existing operational and maintenance BMPs for stormwater runoff for the new overwater structures. Project implementation would not affect the amount of surface runoff at the project site. Therefore, the project is not anticipated to result in on- or off-site flooding. Impacts would be less than significant.

Stormwater Drainage Capacity

NASSCO operates under an individual NPDES Permit (Order R9-2016-0116), maintains a facility BMP Plan Manual, and has a fully contained stormwater diversion system where discharging to the San Diego Bay does not occur. As described in Order R9-2016-0116, the NASSCO facility includes areas where pollutants from ship construction, modification, repair, and maintenance activities are generated (including abrasive blast grit material, primer, paint, paint chips, solvents, oils, fuels, sludges, detergents, cleansers, hazardous substances, toxic pollutants, nonconventional pollutants, materials of petroleum origin, or other substances of water quality significance). As part of Order R9-2016-0116, the project site is subject to an operational SWPPP designed to reduce or prevent the discharge of pollutants from industrial activities.

The project would result in a net increase in overwater coverage of 10,210 square feet for permanent structures (i.e., floating dry dock, mooring dolphins, approach pier fender system, and Repair Complex Wharf) and 300 square feet for temporary structures (i.e., catwalk and removable brow). NASSCO would be required to maintain all existing operational and maintenance BMPs and comply with the RWQCB's Order R9-2016-0116, which regulates polluted runoff, for the new overwater structures. NASSCO's existing NPDES permit would be updated to reflect the increase in overwater coverage. As discussed above, NASSCO operates and maintains a fully-contained SWDS that is designed to capture stormwater runoff from industrial areas and prevent the discharge of industrial stormwater to the San Diego Bay. The SWDS has a capacity to retain an excess of 33,858,000 gallons, which is enough capacity to capture a 100-year storm event, including when accounting for the additional surface areas proposed by the project. Stormwater runoff from industrial high risk areas (i.e., areas where wastes or pollutants of significant quantities from ship construction, modification, repair, and maintenance activities) are treated in an ion exchange treatment system designed to remove pollutants. Once treated, all stormwater captured from the NASSCO facility, including the new overwater structures, would be discharged from the existing SWDS system to the San Diego Metropolitan Sewer System.

Project implementation would not result in a change in the type or quantity of pollutants that would be generated and would not result in a substantial increase in stormwater runoff during operations. Stormwater runoff from the NASSCO facility would continue to be captured and contained for subsequent discharge to the San Diego Metropolitan Sanitary Sewer System. The sanitary sewer system would have adequate capacity for any negligible increases in stormwater from the proposed increase in overwater coverage.

Based on the above discussion, the project would contribute only minimal additional runoff water and would not contribute additional sources of polluted runoff. Therefore, impacts would be less than significant.

Flood Flows

As shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) No. 06073C1884H and 06073C1892H, the project site is within Flood Zone AE, which is an area subject to

flooding during the 100-year storm event (1 percent annual chance of flooding where base flood elevations and flood hazard factors are determined). FEMA defines base flood elevation as the elevation that floodwaters are expected to rise during a flood event with a one percent chance of occurring in any given year. The base flood elevation within the project site is 11 feet (FEMA 2019).

During project construction, all proposed construction elements would be over water and would not have potential to impede or redirect flood flows. 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.

The project would include the repair and replacement of in-water structures. All permanent structures proposed within Flood Zone AE must be designed to ensure that the floor elevation is raised at least one foot above the floodplain elevation and meets the structural requirements of the FEMA National Flood Insurance Program to avoid any damage to persons or structures from a 100-year flood. Review of all permanent structure design plans designed by a professional engineer by the District's Engineering Department is a standard requirement as part of the project review process. As this process is mandatory, no mitigation is needed.

The District's Sea Level Rise Vulnerability Assessment and Coastal Resiliency Report (2019) includes a sea level rise (SLR) vulnerability assessment for Planning District 4 (Tenth Avenue Marine Terminal Planning District). Based on the assessment, this planning district is projected to withstand potential SLR inundation and temporary flooding from SLR during a 100-year storm event at 1.6 feet of projected SLR (anticipated in the year 2050). The higher elevation and existing shoreline armoring are expected to protect many of the land uses in the planning district from substantial projected SLR impacts. Several project components, including areas where quay wall revetment and pile repairs or replacement would occur, may be affected by mean SLR during the useful design life (i.e., 30 years) of the various project elements. However, these project elements are intended to protect the shoreline and improve SLR resiliency through addressing existing revetment failures and structural pile deficiencies. In addition, these project elements would not substantially increase in-water fill volumes and, therefore, would not have potential to impede or redirect flood flows. Furthermore, this type of inundation would occur with or without the proposed project. Consequently, the project is not anticipated to exacerbate existing or projected damage to the environment due to SLR.

Based on the above discussion, the project would not exacerbate the flooding potential of the project site or the effects of flooding on the existing environment. Therefore, impacts would be less than significant.

5.3.7.3 Release of Pollutants due to Inundation

The project site is within Flood Zone AE and is subject to flooding during the 100-year storm event (FEMA 2019). In addition, the project site is within a tsunami hazard area, as delineated on the Tsunami Inundation Map for Emergency Planning for the National City Quadrangle (CalEMA, CGS, and USC 2009). Because the project site is situated on and adjacent to the San Diego Bay, it could also be susceptible to seiche. The project would include the repair and replacement of in-water structures. All project elements would be over or within water and BMPs would be in place to divert runoff from the project site toward proper drainage locations. In addition, the project is subject to RWQCB's Order R9-2016-0116 and NASSCO's own BMP manual, which includes BMPs and requirements to ensure hazardous materials are contained. Therefore, the project would not have

potential to risk release of pollutants during a flood hazard event such as a tsunami or seiche. Impacts would be less than significant.

5.3.8 Land Use and Planning

5.3.8.1 Physically Divide an Established Community

The project involves the repair and replacement of a floating dry dock and associated infrastructure to support ongoing operations within the NASSCO shipyard. Project construction would occur within the NASSCO leasehold, except for the installation of the west offshore mooring dolphin, which would occur outside the District's jurisdiction. Project construction would not expand the physical landside boundaries of the shipyard or expand into any adjacent communities. The project would not result in the construction of any physical barriers or require any road closures that would disrupt access within the surrounding community. No impact would occur.

5.3.9 Mineral Resources

5.3.9.1 Mineral Resources of Value to the Region and the State

The Surface Mining and Reclamation Act directs the State Geologist to identify and map the non-fuel mineral resources of the State to show where economically significant mineral deposits occur and where they are likely to occur based upon the best available scientific data. Areas known as Mineral Resource Zones (MRZs) are classified based on geologic factors, without regard to existing land use and land ownership. The areas are categorized into four general classifications (MRZ-1 through MRZ-4). Of the four MRZ classifications, the MRZ-2 classification is recognized in land use planning because the likelihood for occurrence of significant mineral deposits is high, and the classification may be a factor in the discovery and development of mineral deposits that would potentially be economically beneficial to the local, state, and/or national economy. According to City of San Diego's General Plan Conservation Element, the project site is in an area designated as MRZ-1, indicating that no significant mineral deposits are present (City of San Diego 2008b: Figure CE-6). Furthermore, the project site is in a highly developed and urbanized area with marine-related industrial land uses that are incompatible with and preclude mineral extraction. Therefore, the project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state and no impact would occur.

5.3.9.2 Locally Important Mineral Resource Recovery Sites

The project site is underlain by artificial fill material; no commercial mining operations exist on the project site or in the immediate vicinity. The project site and the surrounding area are not designated or zoned as land with available mineral resources. In addition, the project site does not contain aggregate resources and is not in a mineral resource zone that contains important resources. Therefore, the project would not result in a loss of availability of locally important mineral resources. No impact would occur.

5.3.10 Noise

5.3.10.1 Exposure to Excessive Airport Noise Levels

The San Diego International Airport and Naval Air Station North Island are the closest public and private airports, and their runways are both located approximately 3.3 miles from the project site. Although the project site is located within the airport influence area for the San Diego International Airport, the project site is over 1.5 miles from the airport's 60 dB CNEL noise contour (San Diego County Regional Airport Authority 2014). According to the Naval Air Station North Island ALUCP, the project site is over 1.5 miles from the airport's 65 dB CNEL noise contour (San Diego County Regional Airport Authority 2020). The project is not located within two miles of a public private airstrip. The project would not include any new land use development where people would reside. Operation of the project would not expose existing employees to increased aircraft noise or require an increased number of employees. Therefore, the project would have no impact regarding the exposure of people residing or working in the project area to excessive aircraft-related noise levels, and no mitigation is required.

5.3.11 Population and Housing

5.3.11.1 Population Growth Inducement

The project involves the repair and replacement of a floating dry dock and associated infrastructure to support ongoing operations within the NASSCO leasehold. The project does not propose new homes or businesses that would directly induce population growth. In addition, the project does not include the expansion of existing infrastructure, including changes to existing shipyard operations, that would indirectly induce population growth. Approximately 10 workers would be present on the project site each day during the construction period. Construction workers are anticipated to commute from within the surrounding area and would likely not require temporary local housing. Therefore, there would be a negligible temporary increase in local and regional population during construction. Thus, the project would not induce substantial unplanned population growth and impacts would be less than significant.

5.3.11.2 Displacement of People or Housing

The land use designation for the project site is Marine Related Industrial (Land) and Specialized Berthing (Water). Residential housing is not an allowable use within Harbor Drive Industrial Subdistrict and no housing currently exists on the project site. Therefore, the project would not displace people or housing and would not require the construction of replacement housing. No impact would occur.

5.3.12 Public Services

5.3.12.1 Fire Protection

The project site is served by the City of San Diego's Fire-Rescue Department (SDFRD), along with the San Diego Harbor Police Department (HPD) for fireboat operations. The project involves the repair and replacement of a floating dry dock and associated infrastructure to support ongoing operations within the NASSCO leasehold. Project construction would result in a negligible temporary increase in

construction workers (up to 10 per day) and would not contribute to population growth with potential to affect service ratios for SDFRD or HPD. In addition, project construction would not contribute to substantial congestion on surrounding roadways or that would affect response times for SDFRD or HPD. The project would not result in an expansion of the existing use of the site, an increase in shipbuilding and repair operations, or additional employees, other than those needed during construction. Therefore, project operations would not affect response times for SDFRD or HPD. Based on the above discussion, the project would not require the provision of new or physically altered fire protection facilities. Impacts would be less than significant.

5.3.12.2 Police Protection

The HPD and the City of San Diego Police Department (SDPD) provide police protection services at the project site. As discussed in Section 5.3.12.1, *Fire Protection*, above, project construction would result in a negligible temporary increase in local population and would not affect service ratios for HPD or SDPD. In addition, project construction would not contribute to substantial congestion on surrounding roadways or otherwise hinder police response such that response times for the HPD or SDPD would be affected. The project would not result in an expansion of the existing use of the site, an increase in shipbuilding and repair operations, or additional employees, other than those needed during construction. Therefore, project operations would not affect response times for HPD or SDPD. Based on the above discussion, the project would not require the provision of new or physically altered police protection facilities. Impacts would be less than significant.

5.3.12.3 Schools

Physical impacts on school facilities and services are typically associated with population in-migration and growth, which increase the demand for schools and result in the need for new or expanded facilities, the construction of which may result in physical impacts on the environment. As discussed in Section 5.3.11, *Population and Housing*, the project would not result in permanent population growth. The project would not result in an expansion of the existing use of the site, an increase in shipbuilding and repair operations, or additional employees, other than those needed during construction. Jobs generated during construction would be drawn from the local workforce that is already served by existing school facilities. Therefore, the project would not increase the demand for school facilities or increase existing student to teacher ratios. Furthermore, project activities would not encroach onto any school property. Therefore, the project would not require the provision of new or physically altered schools. No impact would occur.

5.3.12.4 Parks

As discussed in Section 5.3.11, *Population and Housing*, the project would not result in permanent population growth that would generate additional demand for parks. In addition, project activities would not encroach onto any park property. Therefore, the project would not require the provision of new or physically altered parks and recreation facilities. No impact would occur.

5.3.12.5 Other Public Facilities

As discussed in Section 5.3.11, *Population and Housing*, the project would not result in permanent population growth. Therefore, the project would not increase the demand for existing public facilities. Furthermore, project activities would not encroach onto any public facility property.

Therefore, the project would not require the provision of new or physically altered public facilities. No impact would occur.

5.3.13 Recreation

5.3.13.1 Increased Use of Parks or Other Recreational Facilities

An increase in the use of existing parks and recreational facilities typically results from an increase in the number of housing units or residences in the surrounding area. The project would not involve the construction of housing units or residences. As discussed in Section 5.3.11, *Population and Housing*, approximately 10 workers would be present on the project site each day during the construction period, which would contribute to a negligible temporary increase in population. The demand for short-term construction jobs would be met by the local work force, and it is anticipated that no outside labor would be needed. The project would not result in an expansion of the existing use of the site, an increase in shipbuilding and repair operations, or additional employees, other than those needed during construction. Consequently, the project would not contribute to a permanent increase in population that would increase the use of existing parks or recreational facilities. Furthermore, project activities would not require closure of any parks or recreational facilities. Therefore, impacts would be less than significant.

5.3.13.2 Construction or Expansion of Recreational Facilities

The project involves the repair and replacement of a floating dry dock and associated infrastructure to support ongoing operations within the NASSCO leasehold. The project would not involve the construction or expansion of recreational facilities, such that adverse physical effect on the environment would occur. Therefore, impacts would be less than significant.

5.3.14 Tribal Cultural Resources

5.3.14.1 California or Local Register of Historical Resources

Pursuant to Assembly Bill (AB) 52 (codified as PRC Section 21080.3.1), tribes can request to be notified of projects in particular geographies. However, at present, no Native American tribes have requested consultation regarding environmental review for projects subject to CEQA within the District's jurisdiction. Tribal cultural resources (TCRs) are a defined class of resources under Section 1 of AB 52. TCRs include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a tribe. A search of the Native American Heritage Commission's Sacred Lands File revealed that there are no known sacred lands in or near the project area. Additionally, a record search conducted on April 5, 2021, by the South Coastal Information Center resulted in the identification of no tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, within the project site including the construction staging area. Therefore, no impact would occur.

5.3.14.2 Resources of Significance to California Native American Tribes

Under Public Resources Code Section 21080.3.1 (AB 52), a lead agency shall begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic

area of a proposed project if the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of projects in the geographic area that is traditionally and culturally affiliated with the tribe. No California Native American tribes have requested to be informed of projects by the District; therefore, there is no trigger to begin consultation under AB 52, resulting in no resources identified as tribal cultural resources under Public Resources Code Section 21074. Therefore, no impact would occur.

5.3.15 Utilities and Service Systems

5.3.15.1 Significant Environmental Effects from Construction or Relocation of Utility Infrastructure

Based on the discussion in the following sections, the project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities. Therefore, impacts from construction and operation would be less than significant.

Water

Construction activities would require the consumption of water for suppressing fugitive dust emissions, preparing and placing concrete, and other general uses. Construction-related water use would represent a small demand on local and regional water supplies that could be accommodated by the existing provider. The project would not generate a permanent increase in water demand compared to existing conditions. Moreover, the project does not propose or require any new or expanded water facilities or infrastructure, other than the replacement and reconfiguration of existing water lines that connect to the project components that are being replaced.

Wastewater Treatment

As discussed in Section 5.3.11, *Population and Housing*, the project would not result in an increase in population. The temporary jobs generated during project construction would be drawn from the local workforce that is currently served by existing wastewater treatment facilities, and no permanent jobs would be created. Project-generated wastewater requiring treatment would be limited to onsite construction personnel and activities. These activities, primarily limited to a modest increase in restroom use, would not generate a significant amount of new wastewater. The minimal wastewater generated from project construction would not exceed the requirements of any wastewater treatment facilities. In addition, the project would not generate a permanent increase in demand for wastewater treatment compared to existing conditions. As such, no new or expanded wastewater facilities or infrastructure would be required and none are proposed.

Stormwater Drainage

As discussed in Section 3.6, *Hydrology and Water Quality*, the project would result in a net increase in overwater coverage of 10,210 square feet for permanent structures (i.e., floating dry dock, mooring dolphins, approach pier fender system, and Repair Complex Wharf) and 300 square feet for temporary structures (i.e., catwalk and removable brow). Stormwater runoff from the NASSCO facility, including the new overwater structures, would be captured and contained in the existing SWDS for subsequent, controlled discharge to the San Diego Metropolitan Sanitary Sewer System.

The SWDS has a capacity to retain an excess of 33,858,000 gallons, which is enough capacity to capture a 100-year storm event, including when accounting for the additional surface areas proposed by the project. NASSCO would be required to maintain all existing operational and maintenance BMPs and comply with the RWQCB's Order R9-2016-0116, which regulates polluted runoff, for the new overwater structures. NASSCO's existing NPDES permit would be updated to reflect the increase in overwater coverage. As such, no new or expanded stormwater drainage facilities would be required and none are proposed.

Electric Power and Natural Gas

As discussed in Section 3.3, *Greenhouse Gas Emissions and Energy*, construction activities would require the consumption of diesel fuel associated with the operation of heavy-duty construction equipment, material deliveries, and debris hauling; gasoline associated with worker commute trips; and minor amounts of electricity associated with operation of electric-powered construction equipment. Construction-related energy use would represent a small demand on local and regional fuel and electricity supplies that could be accommodated by existing facilities and infrastructure. No changes in operational energy use would occur. Therefore, the project would not result in any new or expanded energy facilities or infrastructure.

Telecommunication

The project would not increase the demand for telecommunications from existing conditions or require the construction of additional telecommunication facilities.

5.3.15.2 Sufficient Water Supplies

As discussed in Section 5.3.15.1 above, construction-related water use would represent a small demand on local and regional water supplies that could be accommodated by the existing provider. As there is no landside construction, including any grading activities, there would not be a need for regular watering to control onsite dust. Moreover, the project would not generate a permanent increase in water demand compared to existing conditions. Therefore, there would be sufficient water supplies available to serve project construction and operation and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would be less than significant.

5.3.15.3 Adequate Wastewater Treatment Capacity

As discussed in Section 5.3.15.1 above, the minimal wastewater generated from project construction would not exceed the requirements of any wastewater treatment facilities. In addition, the project would not generate a permanent increase in demand for wastewater treatment compared to existing conditions. Therefore, the wastewater treatment provider would have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Impacts would be less than significant.

5.3.15.4 Solid Waste Infrastructure Capacity

The project would require removal or demolition of existing structures and disposal of the subsequent debris. Although details are not known at this time, the existing floating dry dock would be sold or disposed of outside of California and the United States, with Mexico being the most likely recipient.

Non-hazardous construction trash and debris would be sent to approved recycling facilities in accordance with the City's Recycling Ordinance and C&D Debris Deposit Ordinance, which requires recycling of a minimum of 65 percent of the construction waste. Remaining non-hazardous construction trash and debris would be handled through NASSCO's current trash hauler, Republic Services, and disposed at local landfills located outside the coastal zone. These landfills are anticipated to include Republic Services Sycamore and Otay Landfills in San Diego County, California.

Project construction is not anticipated to generate hazardous waste. However, if generated, Resource Conservation and Recovery Act (RCRA) and non-RCRA hazardous waste would be removed by NASSCO's current hazardous waste haulers, Univar Solutions or US Ecology. All hazardous waste would be transported under a waste manifest to an authorized hazardous waste Treatment, Storage, and Disposal Facility. These facilities may include US Ecology/Univar Solutions Clearfield Plant in Clearfield, Utah; Clean Harbors Buttonwillow LLC in Buttonwillow, California; or US Ecology Nevada in Beatty, Nevada.

Removal of the existing Repair Complex Wharf is anticipated to generate approximately 100 creosote-treated timber piles. In conformance with California Department of Toxic Substances Control standards, the timber piles would be managed and manifested as hazardous waste and transported to a Class I hazardous waste landfill for disposal. If other hazardous waste is generated, RCRA and non-RCRA hazardous waste would be removed by NASSCO's current hazardous waste haulers, Univar Solutions or US Ecology. All hazardous waste would be transported under a waste manifest to an authorized hazardous waste Treatment, Storage, and Disposal Facility.

No changes in operational generation of solid waste are anticipated. Operational solid waste generation would continue to comply with applicable statutes and regulations defined in Section 5.3.15.5 below, including AB 939 and AB 341, to support statewide goals of diverting solid waste from landfills. It is anticipated that local recycling facilities and landfills have adequate capacity to accommodate the solid waste that would be temporarily generated from construction activities. Therefore, impacts would be less than significant.

5.3.15.5 Compliance with Regulations Related to Solid Waste

The following statutes and regulations related to solid waste are applicable to local jurisdictions and solid waste collectors:

- AB 939 (1989) California Integrated Waste Management Act: Requires all California cities, counties, and approved regional solid waste management agencies to divert 25 percent of their solid waste by 1995 and 50 percent by 2000. AB 939 established the California Integrated Waste Management Board, which later became CalRecycle.
- AB 341 (2012) Mandatory Recycling: Increases California's waste diversion goal from 50 percent to 75 percent by 2020. AB 341 also includes mandatory commercial recycling to reduce greenhouse gas emissions. All commercial businesses that generate more than four cubic yards or more of solid waste per week are required to have a recycling program in place.
- AB 1594 (2014) Green Material Disposal: Effective January 1, 2020, jurisdictions can no longer count green material used as alternative daily cover (ADC) at landfills toward their recycling goals. Jurisdictions are required to develop plans to divert green material from landfills.

- Senate Bill (SB) 1383 (2016) Short-Lived Climate Pollutants – Organic Waste Methane Emissions Reductions: Requires a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. SB 1383 also requires at least 20 percent of currently disposed edible food be recovered for human consumption by 2025. Jurisdictions, haulers, and generators are required to implement programs to comply with the law by January 1, 2022.
- City of San Diego Recycling Ordinance: Provides recycling requirements for City-serviced multi-family residences, privately serviced businesses, commercial/institutional facilities, apartments, condominiums and permitted special events.
- City of San Diego Construction and Demolition (C&D) Debris Deposit Ordinance: Requires construction, demolition, and remodeling projects needing building, combination (i.e., permits for structural modifications to existing structures), and demolition permits pay a refundable deposit and divert at least 65 percent of their debris by recycling, reusing, or donating usable materials.
- City of San Diego Zero Waste Plan (City of San Diego 2015): Part of the City's approved Climate Action Plan, which sets goals of achieving 75 percent diversion of solid waste by 2020, 90 percent diversion of solid waste by 2035, and zero solid waste by 2040.

The project would not conflict or cause a local jurisdiction or service provider to conflict with any federal, state, or local solid waste regulations, including AB 939 (California Integrated Waste Management Act), AB 341 (Mandatory Recycling), AB 1594 (Green Material Disposal), or SB 1383 (Short-Lived Climate Pollutants: Organic). Moreover, waste generated from construction activities would be required to comply with the City Recycling Ordinance and the City's C&D Debris Deposit Ordinance. No changes in operational generation of solid waste are anticipated.

In addition, hazardous wastes would be separated, classified, and disposed of at an appropriate landfill that accepts hazardous waste. The disposal of hazardous wastes would be conducted in accordance with applicable regulations and laws, including the Federal Toxic Substances Control Act, RCRA and Hazardous Solid Waste Act Amendments, Environmental Health Standards for the Management of Hazardous Waste (CCR Title 22, Division 4.5, Section 66001 et seq.), California Labor Code (Division 5, Parts 1 and 7), and San Diego County Code (Title 6, Division 8) (see Section 4.9, Hazards and Hazardous Waste, for additional information). No changes in operational generation of hazardous wastes are anticipated.

Based on the discussion above, project construction and operation would comply with all federal, state, and local management regulations related to solid waste. Impacts would be less than significant.

5.3.16 Wildfire

The project site is within a local responsibility area and is designated by CAL FIRE as a non-VHFHSZ (CAL FIRE 2009). The nearest lands classified as a state responsibility area are approximately 7.8 miles southeast of the project site and the nearest lands classified as VHFHSZ are approximately 1.9 miles north of the project site (CAL FIRE 2007; CAL FIRE 2009). Therefore, the project site is not located in or near a state responsibility area or lands classified as VHFHSZ. Furthermore, the project site is in a developed urban area on and adjacent to the San Diego Bay. The project site is over water, lacks vegetation, and is not in an area susceptible to wildfire. Therefore, the project would have no impact related to wildfire.

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Chapter 6
Alternatives to the Proposed Project

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 project. The chapter's primary purpose is to ensure that the comparative analysis provides sufficient detail to foster informed decision-making and public participation in the environmental process.

Two alternatives to the proposed project are analyzed in this chapter and discussed in terms of their merits relative to the proposed project.

- Alternative 1 – No Project/No Build Alternative
- Alternative 2 – Reduced Overwater Coverage Alternative

Based on the analysis below, the Reduced Overwater Coverage Alternative (Alternative 2) would be the environmentally superior alternative.

6.2 Requirements for Alternatives Analysis

The State CEQA Guidelines require that an 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, but 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 proposed project's objectives. The proposed project includes the following objectives.

1. Meet the needs of the current and anticipated fleets of the military and commercial customers by modernizing the NASSCO shipyard facility through the improvement and/or replacement of existing infrastructure and equipment.
2. Continue the use of existing waterways, available shoreline, and existing shipyard facilities within the Port in an environmentally responsible manner.
3. Enhance environmental protection and meet current safety standards by modernizing equipment and facilities.
4. Preserve jobs by maintaining the physical capacity and technical capability to support the Navy's presence as well as commercial maritime needs in San Diego.
5. Install infrastructure that allows repositioning the floating dock from its home location to a location within the leasehold more efficiently, thereby reducing the amount of time and operations required to release newly constructed or repaired vessels into the water from NASSCO's Ways infrastructure.
6. Demolish and rebuild the Repair Complex Wharf, which has historically been used as a laydown area for vessel repair and staging, but been temporarily taken out of use due to safety concerns.
7. Repair the existing deteriorating revetment and quay wall to restore the revetment to full functionality, protect against erosion, protect structures on land, and prevent further deterioration.
8. Repair or replace deteriorating piles to ensure the continued stability and safety of existing structures, such as the Approach Pier to the Drydock.

CEQA also requires that alternatives be feasible. 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 Resource 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 project's significant impacts, which have been identified to assist with focusing the analysis of alternatives in Section 6.5.

Table 6-1. Summary of Significant Environmental Impacts of the Proposed Project

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Section 3.1, Air Quality and Health Risk		
No significant impact identified	N/A	N/A
Section 3.2, Biological Resources		
Impact-BIO-1: Construction Noise Impacts on Foraging Behavior of Protected Avian Species		X

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Impact-BIO-2: Potential Disturbance of Nests Protected by the Migratory Bird Treaty Act and California Fish and Game Code from Construction Noise		X
Impact-BIO-3: Potential Disruption of or Injury to Green Sea Turtles, Marine Mammals, and Fishes During Pile Driving Activities		X
Impact-BIO-4: Water Quality Impairment Impacts on California Least Tern and California Brown Pelican Foraging		X
Impact-BIO-5: Loss of Open Water Foraging Habitat from Overwater Structures		X
Impact-BIO-6: Potential Water Quality Impairment or Construction-Related Impacts on Eelgrass		X
Impact-BIO-7: Loss of Marine Habitat from Increased Fill in San Diego Bay		X
Impact-BIO-8: Loss of Eelgrass Productivity from Overwater Coverage and Shading		X
Impact-BIO-9: Potential to Substantially Interfere with Wildlife Movement and Substantially Impede the Use of Wildlife Nursery Sites.		X
Impact-BIO-10: Conflict with the San Diego Bay Integrated Natural Resources Management Plan		X
Section 3.3, Climate Change, Greenhouse Gas Emissions, and Energy		
No significant impact identified	N/A	N/A
Section 3.4, Geology and Soils		
Impact-GEO-1: Potential for Project Structures to Cause or Exacerbate Geologic Hazards from Seismic-Related Ground Failure, including Liquefaction		X
Impact-GEO-2: Potential for project structures to be located on unstable geologic units or soils and result in landslide, lateral spreading, subsidence, liquefaction, or collapse		X
Section 3.5, Hazards and Hazardous Materials		
Impact-HAZ-1: Accidental Release of Hazardous Materials into San Diego Bay		X
Impact-HAZ-2: Potential to Encounter Waterside Contaminated Sediment in Project Area from Construction Activities		X
Section 3.6, Hydrology and Water Quality		
Impact-WQ-1: Degradation of Water Quality from Sediment Disturbance During In-Water Construction		X
Impact-WQ-2: Degradation of Water Quality from Accidental Release of Hazardous Materials into San Diego Bay		X
Impact-WQ-3: Waterside Potential to Encounter Hazardous Materials in Sediment in Previously Inaccessible Areas		X
Section 3.7, Land Use and Planning		
Impact-LU-1: Conflict with the California Coastal Act and San Diego Bay Integrated Natural Resources Management Plan		X
Section 3.8, Noise and Vibration		
No significant impact identified	N/A	N/A

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Section 3.9, Transportation, Circulation, and Parking		
No significant impact identified	N/A	N/A

6.4 Alternatives Considered

Four alternatives were initially considered for evaluation, of which two were carried forward for further consideration in the EIR. As described in Section 6.4.1, Alternative Considered but Rejected, two alternatives that were considered, but rejected, were a Reduced Pile Repair/Replacement Alternative and a Floating Dry Dock Alternate Location Alternative. Based on the criteria described in Section 6.3, Selection of Alternatives, a No Project/No Build Alternative and a Reduced Overwater Coverage Alternative were considered and analyzed in Section 6.4.2, Alternatives Selected for Analysis. As described further in Section 6.4.2, these alternatives would eliminate or reduce certain project elements to avoid or lessen one or more significant environmental impacts of the proposed project. No alternatives were suggested in any of the scoping comments received during the 30-day public scoping period.

6.4.1 Alternatives Considered but Rejected

As mentioned above, 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)). The following discusses the alternatives that were initially considered but were rejected from further consideration.

6.4.1.1 Reduced Pile Repair/Replacement Alternative

This alternative would include all project elements described in Section 2.2, *Project Description*, except for the pile repair and replacement associated with the dry dock approach pier as part of Component 1 (Floating Dry Dock Replacement and Modification). As shown on Figures 3.5-1 and Figure 3.5-2, the dry dock approach pier is located in an area of known sediment contamination associated with the San Diego Bay Shipyard Sediment Cleanup Site (Shipyard Sediment Site) under Cleanup and Abatement Order (CAO) R9-2012-0024 issued by the San Diego Regional Water Quality Control Board (RWQCB). Although remedial activities were completed under the CAO, contaminated sediment under the approach pier could not be removed because the existing structure made the area inaccessible to dredging. A sand and gravelly sand cover was placed over the contaminated sediments (refer to Section 3.5.2.4 for additional information).

The purpose of this alternative is to reduce project impacts related to hazards and hazardous materials. Specifically, this alternative would avoid the repair and replacement of up to 76 piles within the Shipyard Sediment Site boundaries, which would reduce the potential for the release of contaminants into the environment. Reducing the amount of pile repair and replacement activities would also reduce other construction-related impacts, such as the amount of turbidity in the water column from sediment disturbance, the level of noise from pile driving, and the amount of emissions and energy consumed from the use of construction equipment.

Although this alternative would lessen the potential for project impacts related to hazards and hazardous materials, the impact would not be entirely avoided. The potential to release contaminated sediments would remain for other project components within the Shipyard Sediment Site boundaries, which include installation of the Lot 20 mooring dolphin and replacement of the Repair Complex Wharf. Further, this alternative would not meet one of the basic project objectives of repairing or replacing deteriorating piles to ensure the continued stability and safety of existing structures. As noted in Chapter 2, *Environmental Setting and Project Description*, existing structural piles throughout the project site show signs of deterioration, cracking, corrosion, and wear. Pile repair and replacement would be necessary to restore the structural integrity of the approach pier and extend its service life, such that the approach pier would safely function in supporting NASSCO's shipbuilding and repair operations.

6.4.1.2 Floating Dry Dock Alternate Location Alternative

This alternative would involve decommissioning the existing floating dry dock and associated infrastructure (e.g., mooring dolphins, approach pier, Repair Complex Wharf) and constructing the infrastructure in an alternate location. Besides the proposed project site, possible suitable locations with marine-related industrial and specialized berthing designations are largely limited to the Working Waterfront Planning District. However, industrial waterfront property in the District's jurisdiction is limited for several reasons, primarily that there are already existing lease agreements with tenants, and the size or physical constraints of alternative sites would not allow implementation of the proposed project. Importantly, the project proponent does not have a current lease or another agreement with the District for another property with adequate acreage or characteristics to accommodate a new floating dry dock that could support NASSCO's existing shipbuilding and repair operations.

In addition, an alternative site would not likely reduce any of the proposed project's significant impacts and, in certain cases, could worsen one or more impacts. For example, construction at another location may require dredging to accommodate a new drydock and associated infrastructure. These activities would potentially result in greater emissions of pollutants and greenhouse gases, degradation of water quality, impacts on biological resources, and releases of hazardous materials. During operations, an alternative site would also require a greater number of vehicle trips and tug trips to transport workers, supplies, and equipment between NASSCO's existing shipyard and the new floating drydock site. Consequently, this alternative would result in greater operational emissions of pollutants and greenhouse gases and wasteful consumption of energy. Additionally, this alternative would not maximize the use of existing facilities and would result in operational inefficiencies that could impair NASSCO's ability to meet the needs of its customers.

In summary, no suitable alternative sites were identified because (1) it is unlikely that developing a new floating dry dock and associated infrastructure at other waterfront location within the District's jurisdiction would reduce a significant impact and would potentially result in more severe impacts, (2) the tenant does not have leasing rights to any other sites, and (3) the proposed project site is surrounded by land uses similar to the proposed project. Thus, the Alternate Location Alternative was rejected from consideration.

6.4.2 Alternatives Selected for Analysis

6.4.2.1 Alternative 1 – No Project/No Build Alternative

The No Project/No Build Alternative is required by CEQA to discuss and analyze potential impacts that would occur if the proposed project were not implemented. Under the No Project/No Build Alternative, the NASSCO shipyard would operate as it currently does until the expiration of the current lease in 2040. None of the proposed project components would be constructed and implemented.

The No Project/No Build Alternative would not address deficiencies related to the age and condition of structures, shoreline sloughing, and operational conditions at the existing dry dock. Specifically, this alternative would retain the existing floating dry dock that has reached the end of its useful life and retain the supporting infrastructure (e.g., mooring dolphins and approach pier) that do not comply with current standards and codes. Additionally, the No Project/No Build Alternative would maintain the current configuration of the shipyard, which requires the floating dry dock to be relocated from the home position to another berth within the leasehold during vessel launches from the inclined building ways or building dock. Therefore, this alternative would not achieve the operational efficiency of repositioning the floating dry dock in the Lot 20 position during vessel launches, which would provide for more efficient positioning using mechanized mooring practices and less time operating tug boats to get it into the temporary location that is currently used. In addition, the Repair Complex Wharf, which is currently in disrepair and provides limited storage and laydown space, would remain in its current condition. The existing failed revetment and exposed shoreline would also be left in its current condition and would remain susceptible to damage from wave action. Lastly, damaged piles would be retained in their current condition and would remain susceptible to deterioration and instability. Without the project improvements, the NASSCO shipyard would not be able to safely function in supporting various shipbuilding and repair operations.

6.4.2.2 Alternative 2 – Reduced Overwater Coverage Alternative

Alternative 2 would include all project elements described in Section 2.2, *Project Description*, except Component 2 (Repair Complex Wharf Replacement) would be reduced in scale. As shown on Figures 3.5-1 and 3.5-2, a portion of the existing Repair Complex Wharf is located within an area of existing sediment contamination associated with the Shipyard Sediment Site under CAO R9-2012-0024 issued by the San Diego RWQCB. Although remedial activities were completed under the CAO, contaminated sediment under the Repair Complex Wharf could not be removed because the existing structure made the area inaccessible to dredging and, unlike other inaccessible areas within the boundaries of the CAP, sand and gravelly sand cover were not used under the Repair Complex Wharf. See Figure 2-10 in Chapter 2, *Environmental Setting and Project Description*, for an illustration of the changes that are planned to the Repair Complex Wharf as part of the project.

To reduce the potential disturbance to contaminated sediment within the Shipyard Sediment Site, Alternative 2 would only rebuild the Repair Wharf Complex to the same size as the existing condition, which is 12,600 square feet. This would represent an overall reduction in size by approximately 6,000 square feet, reducing overwater structures and shading by approximately the same amount, and reducing the proposed backfill area and volume by approximately 10,000 to 12,000 square feet and 2,000 to 3,000 cubic yards, respectively. It is expected, however, that sheet pile sections would still be required to bolster the existing shoreline and supported by some amount of backfill.

Under this alternative, the pile supported concrete pad would increase by approximately 6,300 square feet (for a total of approximately 12,600 square feet) as it would take the place of the area proposed for backfill under the proposed project. Consequently, while there would be substantially less overwater shading and backfill, this alternative would also require approximately double the number of 24-inch octagonal and 18-inch square precast concrete piles to support the larger concrete pad (12,600 sq ft vs 6,330 sf). Therefore, although the amount of overwater coverage, shading, and bay fill would be decreased, pile driving activities would increase.

The purpose of this alternative is to reduce project impacts related to biological resources, hazards and hazardous materials, and hydrology and water quality. Because this alternative would require a smaller footprint than the proposed project within the Shipyard Sediment Site identified under CAO R9-2012-0024, add less overwater structure coverage, and significantly reduce the amount of backfill added in the bay, it is anticipated to result in reduced impacts on biological resources, hazards and hazardous materials, and hydrology and water quality.

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 project. This section also identifies any additional impacts resulting from the alternatives that would not result from the proposed project and considers the alternatives' respective relationships to the proposed project's basic objectives. A summary comparison of the impacts of the proposed project and the alternatives under consideration is included as Table 6-2 at the end of this chapter. A summary comparison of the relationship of the project objectives for the proposed project and the alternatives is included as Table 6-3 at the end of this chapter.

6.5.1 Alternative 1 – No Project/No Build Alternative

6.5.1.1 Air Quality and Health Risk

Alternative 1 would not require any construction activities that would result in temporary increases in air pollutant emissions. However, the No Project/No Build Alternative would not achieve the operational efficiency that would occur under the project from the proposed floating dry dock modifications. Specifically, the No Project/No Build Alternative would maintain the current configuration of the shipyard, which requires the floating dry dock to be relocated from the home position to another berth within the leasehold during vessel launches from the inclined building ways or building dock. In comparison, the project proposes repositioning the floating dry dock to a new Lot 20 temporary position and a mechanized mooring system during vessel launches. This will allow more efficient maneuvering and less time to position the dry dock into the temporary mooring location. Therefore, the No Project/No Build Alternative would require longer tugboat hours than the proposed project, which would result in greater emissions and fuel consumption from tugboats. Although construction-related emissions under Alternative 1 would be avoided when compared to the proposed project, emissions and associated air quality and health risk impacts from operations would be greater under Alternative 1 than the proposed project, which were determined to be less than significant.

6.5.1.2 Biological Resources

Under Alternative 1, no pile driving or construction activities associated with the proposed project would occur that would disrupt foraging behavior of protected avian species; disturb or destroy protected nests; disrupt or injure green sea turtles, marine mammals, and fishes; impair the water quality of California least tern and California brown pelican foraging areas; result in the loss of open water foraging habitat; result in water quality impairment or construction-related impacts on eelgrass; result in the loss of marine habitat from increased fill; result in the loss of eelgrass productivity; or cause conflicts with the plans San Diego Bay Integrated Natural Resources Management Plan. Overall, no biological resource impacts would occur under Alternative 1, and impacts would be reduced compared to the proposed project which were determined to be less than significant after mitigation.

6.5.1.3 Climate Change, Greenhouse Gas Emissions, and Energy

Alternative 1 would not require any construction activities that would result in additional GHG emissions. However, as described in Section 6.5.1.1, *Air Quality and Health Risk*, above, the No Project/No Build Alternative would not achieve the operational efficiency that would occur under the project from the proposed floating dry dock modifications. Specifically, the No Project/No Build Alternative would maintain the current configuration of the shipyard, which requires the floating dry dock to be relocated from the home position to another berth within the leasehold during vessel launches from the inclined building ways or building dock. In comparison, the project proposes repositioning the floating dry dock to a new Lot 20 temporary position and a mechanized mooring system during vessel launches. This would allow more efficient maneuvering and less time to position the dry dock into the temporary mooring location. Therefore, the No Project/No Build Alternative would require longer tugboat hours than the proposed project, which would result in greater GHG emissions and fuel consumption during project operations. Construction-related GHG emissions and energy consumption would be reduced under Alternative 1 when compared to the proposed project; however, because Alternative 1 would result in higher operational GHG emissions and fuel consumption than the proposed project, operational impacts from climate change, greenhouse gas emissions, and energy would be greater compared to the proposed project, which were determined to be less than significant.

6.5.1.4 Geology and Soils

Alternative 1 would not result in ground disturbance or the installation of new structures. Therefore, Alternative 1 would not have potential to cause or exacerbate geologic hazards from seismic-related ground failure or from geologic unit or soil instability. Therefore, impacts related to geology and soils from Alternative 1 would be reduced compared to the proposed project, which were determined to be less than significant after mitigation.

6.5.1.5 Hazards and Hazardous Materials

Alternative 1 would not result in any construction activities that would disturb sediment contamination within the project site. Consequently, Alternative 1 would result in no impact associated with the potential for hazardous materials to be released into the environment and expose workers or the public. Overall, impacts related to hazards and hazardous materials from Alternative 1 would be reduced compared to the proposed project, which were determined to be less than significant after mitigation.

6.5.1.6 Hydrology and Water Quality

Unlike the proposed project, Alternative 1 would not involve any sediment-disturbing construction activities that have the potential to adversely affect water quality from increased turbidity or the release of hazardous materials into the water column. Therefore, Alternative 1 would result in no impacts related to hydrology and water quality, whereas the proposed project would result in less-than-significant impacts with mitigation incorporated. Overall, impacts would be reduced compared to the proposed project.

6.5.1.7 Land Use and Planning

Alternative 1 would not change the existing operations at the site, would not involve any construction activities, and would not have the potential to conflict with plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. As such, Alternative 1 would be consistent with the goals of the Port Master Plan and other applicable plans and policies, including the California Coastal Act, the California Coastal Commission's Sea Level Rise Policy Guidance, San Diego International Airport Land Use Compatibility Plan, and the San Diego Bay Integrated Natural Resource Management Plan. Therefore, Alternative 1 would result in no impacts related to land use and planning, which would be reduced compared to the proposed project, which were determined to be less than significant with mitigation incorporated.

6.5.1.8 Noise and Vibration

Alternative 1 would not involve any noise-generating construction activities, and because the nature of operations would be similar to existing conditions, noise levels under operational conditions would not change. Therefore, no impacts related to noise and vibration would result from Alternative 1, and impacts would be reduced compared to the proposed project, which were determined to be less than significant.

6.5.1.9 Transportation, Circulation, and Parking

Alternative 1 would not involve any new construction activities, and operations would remain the same as existing conditions. As such, this alternative would not generate new VMT or traffic or parking demands above existing conditions. Therefore, Alternative 1 would result in no impacts related to transportation, circulation, and parking, and impacts would be reduced compared to the proposed project, which were determined to be less than significant.

6.5.1.10 Relationship to Project Objectives and Summary of Impacts

The proposed project would not result in any significant and unavoidable impacts. However, the No Project/No Build Alternative would not involve in-water construction activities; therefore, this alternative would avoid all construction-related impacts of the proposed project that would be less-than-significant or less-than-significant with mitigation related to air quality and health risk; biological resources; climate change, greenhouse gas emissions, and energy; geology and soils; hazards and hazardous materials; hydrology and water quality; land use and planning; noise and vibration; and transportation, circulation, and parking. However, Alternative 1 would continue to move the floating dock greater distances than the proposed project and therefore operational air and GHG emissions, as well as energy use, would be greater under the No Project/No Build Alternative. In addition, the No Project/No Build Alternative would not meet any of the project

objectives, which aim to address deficiencies related to the age and condition of structures, shoreline sloughing, and operational conditions at the NASSCO shipyard facility. Under the No Project/No Build Alternative, the NASSCO shipyard would not be able to safely function in supporting various shipbuilding and repair operations. Regardless of whether the No Project/No Build Alternative is adopted, NASSCO may still need to propose future improvements in order for the shipyard infrastructure to comply with current standards and codes or in the event of infrastructure failure in order to continue safe operations.

6.5.2 Alternative 2 – Reduced Overwater Coverage Alternative

6.5.2.1 Air Quality and Health Risk

Under Alternative 2, there would be less construction associated with Component 2 (Repair Complex Wharf Replacement) compared to the proposed project. As a result, emission sources from construction equipment would be reduced under Alternative 2; thus, daily and annual construction emissions of criteria pollutants would generally be decreased compared to the proposed project. Similar to the proposed project, Alternative 2 would involve the use of the Lot 20 temporary position for repositioning the floating dry dock during vessel launches. Therefore, emissions during operation of Alternative 2 would be similar to emissions from the proposed project. Because there would be a reduction in emissions during construction and similar emissions during operation compared to the proposed project, overall impacts associated with emissions of criteria pollutants from Alternative 2 would be slightly less than the proposed project, which were determined to be less than significant.

6.5.2.2 Biological Resources

Alternative 2 would involve in-water work, including pile driving, equipment storage, barge operations, and some new over water coverage (although a smaller amount than what would occur under the proposed project) that has the potential to result in significant impacts on biological resources. These impacts include disrupting foraging behavior of protected avian species; disturbing or destroying protected nests; disrupting or injuring green sea turtles, marine mammals, and fishes; impairing the water quality of California least tern and California brown pelican foraging areas; resulting in the loss of open water foraging habitat; resulting in water quality impairment or construction-related impacts on eelgrass; resulting in the loss of marine habitat from increased fill; resulting in the loss of eelgrass productivity; or causing conflicts with the plans San Diego Bay Integrated Natural Resources Management Plan. Compared to the proposed project, however, Alternative 2 would reduce the overwater coverage of the project by 4,330 square feet, which would reduce the area of open water foraging habitat that would be lost under the project, reduce the effects of shading on eelgrass productivity, and decrease fill in the bay. However, the effects from pile driving under this alternative, which include the potential to disrupt or injure marine species, would be greater due to the additional piles that would be driven instead of the backfill proposed by the project. Similar to the proposed project, mitigation would be required to reduce these impacts to less-than-significant levels. Overall, impacts on biological resources from Alternative 2 would be slightly reduced compared to the proposed project, which were determined to be less than significant after mitigation.

6.5.2.3 Climate Change, Greenhouse Gas Emissions, and Energy

Under Alternative 2, there would be less construction associated with Component 2 (Repair Complex Wharf Replacement) compared to the proposed project. As a result, sources of construction-related GHG emissions from construction equipment would be reduced under Alternative 2. Similar to the proposed project, Alternative 2 would involve the use of the Lot 20 temporary position for repositioning the floating dry dock during vessel launches. Therefore, GHG emissions and fuel consumption during operation of Alternative 2 would be similar to that of the proposed project. Because there would be a reduction in GHG emissions and fuel consumption during construction and similar GHG emissions and fuel consumption during operation compared to the proposed project, overall impacts associated with GHG emissions and fuel consumption from Alternative 2 would be slightly less than the proposed project, which were determined to be less than significant.

6.5.2.4 Geology and Soils

Similar to the proposed project, Alternative 2 would involve the installation of new in-water structures. A condition of approval for the Coastal Development Permit and a mitigation measure similar to the proposed project would require these structures to be engineered and constructed in accordance with a site-specific geotechnical investigation, which would include recommendations to address hazards from existing geologic and soil conditions. Similar to the proposed project, mitigation would be required to ensure that all components under Alternative 2 are specifically evaluated. This mitigation would ensure that all structures are designed and installed to withstand and avoid causing or exacerbating geologic hazards. Therefore, impacts related to geology and soils from Alternative 2 would be similar to the proposed project, which were determined to be less than significant after mitigation.

6.5.2.5 Hazards and Hazardous Materials

Similar to the proposed project, Alternative 2 would involve construction activities with potential to disturb areas with existing sediment contamination, thereby resulting in potentially significant hazards and hazardous materials impacts. Similar to the proposed project, mitigation would be required to reduce these impacts to less than significant. In general, the extent of these impacts would be less under Alternative 2 due to the reduced size of the Repair Complex Wharf (reduced by approximately 6,000 sf). However, instead of covering the area under the existing Repair Complex Wharf with compacted granular backfill, as proposed by the project, Alternative 2 would drive piles to support a concrete pad roughly the same size as the existing Repair Complex Wharf. Driving piles in this area rather than covering existing sediment with compacted granular backfill may result in additional sediment disturbance beyond that which is proposed by the project in an area that was inaccessible for remedial activities as part of the CAO. This activity would have the potential to disturb and release contaminated sediment into the environment and impair water quality. Overall, however, hazards and hazardous materials impacts under Alternative 2 would be slightly reduced compared to the proposed project, which were determined to be less than significant after mitigation.

6.5.2.6 Hydrology and Water Quality

Similar to the proposed project, Alternative 2 would involve pile removal or replacement in an area with existing sediment contamination. Therefore, Alternative 2 has the potential to violate water quality standards or degrade existing water quality. Similar to the proposed project, mitigation would be required to reduce these impacts to less-than-significant levels. However, the extent of

impacts would be slightly less under this alternative due because the smaller Repair Complex Wharf area that would be constructed. This alternative would result in overall less sediment disturbance However, as discussed under Hazards and Hazardous Materials, above, Alternative 2 would also have greater disturbance of sediments currently located underneath the Repair Complex Wharf, which has been inaccessible for previous remedial actions under the CAO. Overall, because Alternative 2 would reduce the area of overall sediment disturbance and reduce the amount of in-water construction (including reduced bay fill), hydrology and water quality impacts under Alternative 2 would be slightly reduced compared to the proposed project.

6.5.2.7 Land Use and Planning

Under Alternative 2, there would be less construction associated with Component 2 (Repair Complex Wharf Replacement) compared to the proposed project and less fill in the bay. Under Alternative 2, less mitigation would be needed to reduce impacts related to fill to less than significant. Therefore, Alternative 2 would result in a slightly reduced land use and planning impact compared to the proposed project. However, like the proposed project, mitigation would be required to ensure that Alternative 2would be consistent with the goals of the Port Master Plan Port Master Plan and other applicable plans and policies, including the California Coastal Act, the California Coastal Commission's Sea Level Rise Policy Guidance, San Diego International Airport Land Use Compatibility Plan, and the San Diego Bay Integrated Natural Resource Management Plan. Therefore, land use and planning impacts under Alternative 2 would be slightly reduced compared to the proposed project.

6.5.2.8 Noise and Vibration

Alternative 2 would involve the use of construction equipment similar to the equipment that would be used for the proposed project, including cranes, excavators, jackhammers, impact and vibratory pile drivers, dump trucks, shears, air compressors, concrete trucks and pumps, welding units, generators, and haul trucks. Compared to the proposed project, construction activities would be slightly reduced because of the smaller size of the Repair Complex Wharf. However, more piles would potentially need to be driven compared to the proposed project, which is a source of substantial noise. Moreover, construction worker trips and truck trips would be the same between the proposed project and Alternative 2 for all other project components. Similar to the proposed project, Alternative 2 would result in less-than-significant impacts related to noise standards, temporary noise increases, and vibration. Therefore, noise and vibration impacts under Alternative 2 would be similar to the proposed project.

6.5.2.9 Transportation, Circulation, and Parking

Alternative 2 would generate construction traffic, including construction worker trips and truck trips. Compared to the proposed project, Alternative 2 would require slightly fewer haul trips associated with fewer trips associated with fill soil for construction of Component 2 (Repair Complex Wharf Replacement). However, construction worker trips and truck trips would be the same between the proposed project and Alternative 2 for all other project components. Similar to the proposed project, Alternative 2 would result in less-than-significant impacts related to transportation, circulation, and parking. Therefore, transportation, circulation, and parking impacts under Alternative 2 would be slightly less than the proposed project.

6.5.2.10 Relationship to Project Objectives and Summary of Impacts

Alternative 2 would reduce project impacts related to air quality and health risk; biological resources; climate change, greenhouse gas emissions, and energy; hazards and hazardous materials; hydrology and water quality; land use/planning, and transportation during construction. However, these impacts would not be entirely avoided. Constructing the smaller Repair Complex Wharf and other project components (i.e., improvements to the approach pier, installation of the Lot 20 inshore mooring dolphin, and other pile repair and replacement throughout the project site) would still result in impacts to those resource areas, but to a lesser degree. Further, the reduced size of the Repair Complex Wharf under Alternative 2 would provide limited storage and laydown capabilities compared to the proposed project. Therefore, Alternative 2 would be less effective of meeting the project objectives (#1, #2, and #6) that include implementing infrastructure improvements that continue the use of available space within the leasehold in support of NASSCO's shipbuilding and repair operations and not completely achieving improved efficiencies to help meet the needs of the current and anticipated military and commercial customers.

6.5.3 Environmentally Superior Alternative

Pursuant to CEQA, the EIR is required to identify the environmentally superior alternative. Although the No Project/No Build Alternative (Alternative 1) reduces the greatest number of significant impacts, CEQA requires that when the environmentally superior alternative is the No Project/No Build Alternative, the environmentally superior alternative from among the other alternatives should be identified. The Reduced Overwater Coverage Alternative (Alternative 2) reduces impacts of the proposed project associated with air quality and health risk; biological resources; climate change, greenhouse gas emissions, and energy; hazards and hazardous materials; hydrology and water quality, land use/planning, and transportation.

As discussed in Section 6.5.2, Alternative 2 would reduce the potential to disturb and release contaminated sediment into the environment and to impair water quality during construction. The reduction in pile driving activities would also lower the potential to disrupt or injure marine species. Additionally, Alternative 2 would reduce the overwater coverage of the project by 4,330 square feet, which would reduce the area of open water foraging habitat that would be lost under the project and reduce the effects of shading on eelgrass productivity. However, impacts on biological resources, hazards and hazardous materials, and hydrology and water quality would still be significant and would require mitigation to reduce the impacts to less-than-significant levels. In addition, the reduced construction activity under Alternative 2 would contribute to slightly lower emissions of air pollutants and GHG and consumption of energy resources; however, the impact would remain less than significant like the proposed project. Land use and planning impacts would be slightly reduced due to less fill being proposed in the bay. Finally, transportation impacts would be slightly less due to less fill being imported to the project site as a result of the smaller Repair Wharf Complex. Impacts on all other resources would be similar to the proposed project under Alternative 2.

Based on the above discussion, Alternative 2 is considered the environmentally superior alternative, and overall impacts on environmental resources would be reduced compared to the proposed project (see Table 6-2). However, Alternative 2 would not reduce impacts of the proposed project to the extent that the project's significant impacts would be entirely avoided. In addition, this alternative would only partially achieve the project objectives (#1, #2, and #6) of implementing infrastructure improvements that continue the use of available space within the leasehold in support of NASSCO's shipbuilding and repair operations and not completely achieving improved

efficiencies to help meet the needs of the current and anticipated military and commercial customers (see Table 6-3).

Table 6-2. Summary Impact Comparison of Proposed Project Alternatives

Environmental Resource	Proposed Project Determination	No Project/No Build Alternative (Alternative 1)	Reduced Overwater Coverage Alternative (Alternative 2)
Air Quality and Health Risk	Less than Significant	+1	-1
Biological Resources	Less than Significant w/Mitigation	-2	-1
Climate Change, Greenhouse Gas Emissions, and Energy	Less than Significant	+1	-1
Geology and Soils	Less than Significant w/Mitigation	-2	0
Hazards and Hazardous Materials	Less than Significant w/Mitigation	-2	-1
Hydrology and Water Quality	Less than Significant w/Mitigation	-2	-1
Land Use and Planning	Less than Significant w/Mitigation	-2	-1
Noise and Vibration	Less than Significant	-2	0
Transportation, Circulation, and Parking	Less than Significant	-2	-1
Total[1]	**--**	**-12**	**-7**

[1] Note, the scoring provided in this table is to assist with determining the environmentally superior alternative and does not provide any other measurable difference between alternatives and the proposed project. Lowest score is environmentally superior alternative; however, if the lowest score is the No Project Alternative, then the next lowest score is the environmentally superior alternative.

-2 = Reduced; -1 = Slightly Reduced; 0 = Similar; +1 = Slightly Greater; +2 = Greater

Table 6-3. Summary Project Objective Comparison of Proposed Project Alternatives

Project Objective	No Project/No Build Alternative (Alternative 1)	Reduced Overwater Coverage Alternative (Alternative 2)
1. Meet the needs of the current and anticipated fleets of the military and commercial customers by modernizing the NASSCO shipyard facility through the improvement and/or replacement of existing infrastructure and equipment	No	Partially
2. Continue the use of existing waterways, available shoreline, and existing shipyard facilities within the Port in an environmentally responsible manner.	No	Partially
3. Enhance environmental protection and meet current safety standards by modernizing equipment and facilities.	No	Yes

Project Objective	No Project/No Build Alternative (Alternative 1)	Reduced Overwater Coverage Alternative (Alternative 2)
4. Preserve jobs by maintaining the physical capacity and technical capability to support the Navy's presence as well as commercial maritime needs in San Diego.	No	Yes
5. Install infrastructure that allows repositioning the floating dock from its home location to a location within the leasehold more efficiently, thereby reducing the amount of time and operations required to release newly constructed or repaired vessels into the water from NASSCO's Ways infrastructure.	No	Yes
6. Demolish and rebuild the Repair Complex Wharf, which has historically been used as a laydown area for vessel repair and staging, but been temporarily taken out of use due to safety concerns.	No	Partially
7. Repair the existing deteriorating revetment and quay wall to restore the revetment to full functionality, protect against erosion, protect structures on land, and prevent further deterioration.	No	Yes
8. Repair or replace deteriorating piles to ensure the continued stability and safety of existing structures, such as the Approach Pier to the Drydock.	No	Yes

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Chapter 7
List of Preparers and Agencies Consulted

7.1 Lead Agency—San Diego Unified Port District

Wileen Manaois	Director, Development Services
Scott Vurbeff	Senior Planner, Development Services
Megan Hamilton	Senior Planner, Development Services
Peter Eichar	Program Manager, Planning & Environment, Planning
Rebecca Harrington	Assistant General Counsel, Office of the General Counsel
John Carter	Senior Deputy General Counsel, Office of the General Counsel
Karen Holman	Director, Environmental Protection
Paul Brown	Program Manager, Planning & Environment
Eileen Maher	Director, Environmental Conservation,
Christian Braun	Program Manager, Engineering-Construction
Ryan Donald	Department Manager, Real Estate
Cameron McLeod	Assistant Asset Manager, Real Estate

7.2 EIR Preparation—Ascent Environmental

Chris Mundhenk	Principal-In-Charge
Nicole Greenfield	Assistant Project Manager/Environmental Planner
Tristan Evert	Environmental Planner
Alta Cunningham	Architectural Historian/Environmental Planner
Kelley Kelso	Environmental Scientist
Linda Leeman	Principal Biologist
Tammie Beyerl	Senior Botanist and Wetland Ecologist
Allison Fuller	Wildlife Biologist
Poonam Boparai	Air Quality and Climate Change Principal
Matthew McFalls	Air Quality and Climate Change Manager
Dimitri Antoniou	Air Quality, Climate Change, and Noise Practice Lead
Zachary Miller	Senior Transportation and Environmental Planner
Jazmin Amini	Transportation and Environmental Planner
Phi Ngo	GIS Specialist/Resource Analyst

Corey Alling	Graphics Specialist
Michele Mattei	Document Production Specialist
Gayiety Lane	Document Production Specialist
Riley Smith	Document Production Specialist

7.3 EIR Preparation—Ridgeline Environmental

Charlie Richmond	Project Manager/QA&QC

7.4 District's Outside Counsel—Hogan Law APC

Mike Hogan	Attorney

7.5 District's Project Management Consultant—HDR

Jenny Vick	Senior Environmental Project Manager

7.6 Transportation Study—Intersecting Metrics

Stephen Cook, P.E.	Principal

7.7 Marine Habitat Assessment—Marine Taxonomic Services, LTD

Robert Mooney, Ph.D	Principal Marine Scientist

7.8 Underwater Noise Study—Illingworth & Rodkin

James Reyff	Principal
Adwait Ambaskar	Staff Consultant

7.9 Agencies, Organizations, and Persons Consulted

The following agencies, organizations, and persons were sent the Notice of Preparation (NOP) for the NASSCO Floating Dry Dock Replacement and Waterfront Improvement Project Environmental Impact Report. Where specific contacts were known, copies were sent to them directly. Subsequent consultations occurred in several cases. In addition, the District consulted directly with the Regional Water Quality Control Board related to water quality and sediment conditions within the project

area given the project site's location within the boundaries of Cleanup and Abatement Order No. R9-2012-0024.

Agency/Company Name	Specific Contacts
US Army Corps of Engineers	
US Coast Guard – Marine Safety	
US Department of the Navy	Walter Wilson
US Naval Facilities Engineering Command, Southwest	Ya-Chi Huang
US Environmental Protection Agency	Megan Fitzgerald Allan Ota
US Fish and Wildlife Service	Brian Collins Christine Medak Vickie Touchstone Sandy Vissman
State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit (SCH)	N/A
California Coastal Commission	Melody Lasiter
California Department of Fish and Wildlife	Ed Pert
California Department of Transportation	Kimberly Dodson Maurice Eaton
Native American Heritage Commission	
San Diego Regional Water Quality Control Board	Mike Porter Lisa Honma Eric Beckman Sarah Mearon Lara Quetin
San Diego Association of Governments	Susan Baldwin Dan Gallagher Katie Hentrich Charles Stoll Ron Saenz
County of San Diego, Planning and Development Services Department	
San Diego County Air Pollution Control District	Eric Luther
San Diego County Airport Land Use Commission	Ted Anasis
City of San Diego, Development Services Department	
City of San Diego, Environmental Services Department	

City of San Diego, Transportation and Stormwater Department	
Barrio Logan Planning Group	
Coast Law Group	Livia Beaudin
San Diego Coastkeeper	
Environmental Health Coalition	

Chapter 8
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Chapter 6—Alternatives to the Proposed Project

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